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ORIGINAL LECTURES.

CLINICAL LECTURE

ON BLEPHARITIS MARGINALIS,—INFLAMMATION OF THE MARGIN OF THE EYELIDS.

Delivered at the New York Eye and Ear Infirmary

BY W. F. MITTENDORF, M.D.

GENTLEMEN,—Among all affections of the eyes, those of the lids, and especially those affecting their free margin, are the ones most frequently met with. This is due, to a great extent, to the exposed position of the lids, and to the large number of glands which are found, especially along their free edge.

Such diseases are not only of frequent occurrence, but will also prove, at times, extremely obstinate to treatment; they are a source of great annoyance to the patient, on account of the unsightly deformity accompanying them. Their treatment will therefore be a matter of great importance not only to the specialist, but also to the general practitioner.

You will remember that, surrounding the eyelashes, the free edge of the lids is studded with small sebaceous glands, the function of which is to keep the margins greased, in order to prevent the tear-fluid from flowing over the cheek. These glands have been named after the celebrated Vienna anatomist, Zeiss, and have been called Zeiss's or tarsal glands. An inflammation of them is called blepharadenitis. After a while the inflammatory process must extend to the connective tissue of the lid, and then we have blepharitis marginalis. Another name of the affection is ophthalmia tarsi. But you will readily understand that by this name is meant an inflammation of the entire lid, whereas blepharadenitis indicates an inflammation of a particular portion of the lid. You will very frequently have patients coming to you who have suffered from diseases of this kind not only for months, but even for years. During that time they had been constantly annoyed by the red appearance of the lids, and by the inconvenience of having the eyelashes always glued together and the tears flowing over the cheeks.

Blepharadenitis is, according to the extent to which the lid participates in the inflammation, to be divided into different classes. The common form is characterized by the appearance of small crusts on the free edge of the lid, surrounding the eyelashes. After removing these crusts, we generally find that the underlying skin is red, looks inflamed. During the night the evaporation of the exudation of these inflamed glands glues the lids together, and the patient is unable to open the eyes in the morning. During the day the eyelashes are matted together, and present an unsightly deformity. This is known as *simple blepharadenitis*.

If the process be allowed to go on, the surrounding tissue is apt to break down, and you have the disease complicated with small ulcerations in different parts of the margin of the lids. Removing the crusts which have formed over the parts, you will find that there is a depressed ulcer underneath, which bleeds easily as soon as the crust is removed. This is the *ulcerative form*.

If this kind of blepharadenitis be not promptly treated, the ulcerative process will extend over the entire free margin of the lid, and as a result we shall have cicatricial changes, which produce great deformity by altering the appearance of the entire free margins. This is known as *lippitudo*, popularly called *blear-eye*.

If the skin do not break down, and the infiltration extend to the deeper parts of the free edge of the lid, it will result in hypertrophy, which in some cases exists to a remarkable degree, there being quite a thick elevation along the entire free margin of the lid. This variety is known as *tylosis*.

There is one other form of blepharadenitis, which is not so marked in its appearances, but which often proves to be extremely obstinate. It is apt to occur in persons with a very delicate skin, especially persons with red hair, because they, as a rule, have a very fine skin, and at the free edge of the lid especially so. The least irritation, sometimes even the atmosphere of the room, or slight straining of the eye from work near by, will in these cases produce fine, little scales on the lids: hence this form of the disease has been given the name *squamous blepharadenitis*. In this form we never have ulcerations of

the lids. The principal features are redness and fine, little, flake-like deposits on the free edge of the lids. This form of blepharadenitis is principally found, too, in eyes which have an error of refraction, especially in hypermetropic eyes, or those that are afflicted with astigmatism. In these cases great accommodative efforts have to be made, which lead to hyperæmia of the free edge of the lids and subsequent irritation of the glands, and, as a result, we get this redness and, as a result of the changed secretion, fine scales.

Blepharadenitis in its simpler form is frequently associated with eczematous conditions, and, if the trouble extend from the edge of the lid to the integument we speak of, eczema of the lid. In these cases you will frequently find eczematous patches behind the ear or on other parts of the body. You cannot expect to cure this form of blepharadenitis by local applications; you will have to resort to internal medication besides. But, as a rule, blepharadenitis is due to local causes. In children the lid-trouble is frequently due to phlyctenular conjunctivitis. In this disease there is, accompanying the inflammatory process, an abundant secretion of sharp, acrid tears, which, as they pass over the free border of the lid, cause an inflammation of the glandular tissue, and sometimes, if they reach the cheek, they cause an excoriation of the integument. This condition is very apt to be found in strumous or scrofulous children.

Another milder form is apt to accompany simple conjunctivitis: it will, as a rule, disappear as soon as the exciting cause is removed.

Treatment.—With regard to the treatment of these affections, it must differ according to the cause and nature of the disease. You will readily understand that the first indication for treatment is the removal of the crusts. If you fail to do this, all your local applications can have little or no effect, because they do not reach the seat of the disease at all. This should be done very carefully, after softening them by the use of warm water or olive oil.

In simple blepharadenitis one of the best remedies at our disposal is liquor plumbi subacetatis, which should be used in the following way:

℞ Liq. plumbi subac., f3j.

Sig.—Six drops to half a tumbler of water. Use as an eye-lotion five or six times a day for four or five minutes at a time.

If you use the lotion stronger than here indicated, it will produce a peculiar, dry sensation of the free edge of the lid, due to the powerful astringent effect of the sugar of lead. This remedy will in a short time remove the unpleasant redness of the lid entirely.

During the night, in order to prevent the gluing together of the lids, as well as to protect the inflamed parts, a very mild preparation of the red oxide of mercury is indicated. The following prescription, which is known as *Pagenstecher's ointment*, will act very nicely:

℞ Hydrarg. oxid. rubri, gr. j;
Vaseline, 3j.

Fiat unguent.

Sig.—Apply before retiring.

In order to get the full effect of this medicine, it is necessary that the lid be thoroughly cleaned and dried before it is applied. To effect this object, the eye may be washed with

℞ Sodii bicarbon., 3j;
Aq. camphoræ, f3viij. M.

Sig.—Use at night.

Having removed all the crusts and washed the free edge of the lid with this solution, the oxide ointment may be applied. The greatest care should be exercised in preparing the oxide of mercury ointment. The druggist should triturate the red oxide with a few drops of the oil of sweet almonds, so as to reduce it to a very fine powder, and then add the vaseline and mix well together. The difficulty of preparing this ointment properly has led us to substitute for the red oxide the yellow oxide of mercury, which is a very fine powder and can be mixed readily with simple cerate or with vaseline. The proportion may be made a little stronger when the yellow oxide is used, because it is not quite so powerful in its action.

℞ Hydrarg. oxid. flavi, gr. iss;
Ung. simpl., 3j. M.

Fiat unguent.

Sig.—Apply to the edge of the lid before retiring.

An inflammation of the lids of this kind will frequently extend to the conjunctiva, not only from direct extension of the inflammatory action, but also from the fact that the crusts which form on the free edge of the lid fall into the conjunctival sac and act there as foreign bodies.

In this case it is necessary to use a preparation which can be applied in the conjunctival sac as well, and the following prescription has been of the greatest use to me:

℞ Sodii biborat., gr. xx;
Mucilag. cydon.,
Aq. laurocerasi, āā fʒss;
Aq. camphoræ, q. s. ad fʒiij. M.

Sig.—Use as an eye-lotion three times a day.

This should not only be applied to the free edge of the lid, but some of it should be allowed to enter the conjunctival sac as well.

The action of the cherry-laurel water is that of a mild anodyne, of the mucilage of quince-seeds soothing, of the camphor-water slightly stimulating, while the biborate of soda is astringent.

If the inflammatory process have extended to the integument of the lid, if we have the condition which may justly be termed eczema of the lid (in children arising from scratching the eyelids constantly), it is well to use a preparation which contains morphine or some anodyne, and in this case we can use a stronger preparation of mercury:

℞ Hydrarg. oxid. rubri, gr. v;
Morph. sulph., gr. iss;
Unguent. simpl., ʒss. M.

Fiat unguent.

Sig.—Apply, after removing the scab and drying the parts carefully, to the excoriated parts.

In the summer, as a rule, I use simple cerate, because vaseline is too soft and will allow the red oxide to precipitate to the bottom of the jar. During the winter the vaseline may be substituted for the simple cerate, as it is softer and more easily applied, and yet not too soft.

That form of blepharadenitis which is associated with ulcerations of the free edge of the lid should be treated in the same manner, but the ulcerated parts should, in addition, be touched once a day with a solid stick of nitrate of silver. In doing this, much care must be exercised only to touch the ulcerations very gently, for, if the nitrate enters the eye, it will prove extremely painful. Applying this every day will, as a rule, lead to a perfect and rapid cure of this otherwise very tedious and troublesome disease.

There is one form of blepharadenitis which we cannot expect to cure entirely, —namely, that in which the free edge of the lid is completely altered. In these cases you can only expect to relieve the trouble partially, allay active inflammation, without, of course, being able to change the cicatricial conditions, and for this purpose I use a salve which is to be applied at night:

℞ Hydrarg. oxid. rubri, gr. ii;
Liq. plumbi subac., gtt. x;
Vaseline, ʒii. M.

Fiat unguent.

Sig.—Apply before going to bed.

During the day such patients ought to use a solution of alum and camphorated water:

℞ Alum., gr. x;
Aq. laurocerasi, fʒss;
Aq. camphoræ, fʒj. M.

Sig.—Use as an eye-lotion three times a day.

One word with regard to the hygienic management of patients suffering from blepharadenitis and eczema of the lids. Such patients should not be kept in badly-ventilated rooms. Their bedrooms especially should be light and have good ventilation. They ought to have as much out-door exercise as possible, and their general condition ought to be faithfully attended to. You will find in most of these cases that their diet has been sadly neglected by the parents. You should insist that the child have only three meals a day, nothing whatever between meals. Sweets and pastry, such as pies, etc., ought not to be allowed. The child ought not even to have bread or crackers between meals. The following mixture, which varies a little from the officinal, may be given with advantage:

℞ Sodii bicarb., ʒij;
Fl. ext. rhei, fʒij;
Ess. menth. pip.,
Ess. zingib., āā fʒj;
Aquæ ad fʒiv. M.

Sig.—For a child, a teaspoonful three times a day; for an adult, a tablespoonful three times a day, half an hour before meals, diluted in sufficient water to make it pleasant to take.

There is another form of blepharadenitis, accompanied by thickening of the free edge of the lid. This thickening can be best relieved by the following application:

℞ Ungt. hydrarg. nitr., ʒss;
Ungt. simpl., ʒiij. M.

Fiat unguent.

Sig.—Apply morning and evening.

I have spoken also of another—the squamous—form of blepharadenitis. Here it is absolutely necessary to correct any error of refraction which may exist. The adjustment of glasses for such patients is fully as important as any local remedies which you may resort to. You will find that cases of this kind, in which the disease has existed perhaps for years, will rapidly improve after proper glasses shall have been prescribed. I have also found of great value in these cases a stimulating lotion composed as follows:

℞ Spir. vini gallici,
Spir. lavand. simpl., āā f℥ss;
Spir. rosmar. simpl., f℥iij. M.

Sig.—Apply to the lids morning and evening.

Do not forget to tell the patient that when applying this lotion to the lids the eye should be tightly closed. If, however, any of it should get into the eye, it will cause considerable smarting; but it will do no harm. If you will tell your patient to allow a few drops to evaporate from the palms of the hands, holding the hands up to the eyes, opening and closing the eyelids so as to allow the vapors to come in contact with the free edge of the lids very thoroughly, it will produce a better effect.

In those cases of inflammation of the free edge of the lid where there is a certain amount of redness remaining, all active inflammatory process, however, having subsided, a preparation of the following kind will have a good effect:

℞ Ol. cadini, gtt. v;
Ungt. simpl., ℥j. M.

Fiat unguent.

Sig.—Apply at night.

All these ointments should be used at night. If it be applied to the free edge of the lid during the day, some of the grease is very apt to get into the eye and produce slight disturbance of vision. The ointment should therefore be cleaned off the lid the next morning by washing with water containing a little bicarbonate of soda or Castile soap.

You will occasionally meet with very chronic cases of eczema of the lid, and in these cases it may be necessary, especially in adults, to give arsenic. For this purpose you may employ either Pearson's or Fowler's solution. If you do not wish to tell your patient to use simply so many drops of Fowler's solution, a very nice vehicle will be found in syrup of ginger:

℞ Liq. potassii arsen., f℥iss;
Syrupi zingiber., f℥iij. M.

Sig.—One teaspoonful three times a day after meals. For children the amount of arsenic should be diminished, one minim three times a day being sufficient.

It is hardly necessary to tell you, gentlemen, that in children of a scrofulous constitution you should give cod-liver oil combined with the iodide of iron:

℞ Syr. ferri iodidi, f℥ss;
Ol. morrhuæ, f℥iv;
Syr. zingiber., f℥ij. M.

Sig.—A half to one teaspoonful three times a day.

If this be well shaken, the cod-liver oil will be found to be very much disguised by the ginger syrup.

Where there is much of an eczematous condition, with an abundant formation of yellow crusts, I have found calcined magnesia with rhubarb of great service:

℞ Magn. cal. pond., ℥iss;
Fl. ext. rhei, f℥ii;
Ess. zingib., f℥ss;
Aq. anisi, f℥iv. M.

Sig.—One drachm three times a day before meals.

Some cases of blepharadenitis are due to traumatism, but usually in these cases the injury to the lid is comparatively insignificant, the injury to the eye being, as a rule, of greater importance. Among injuries of the lids are burns, and these are treated with great advantage with a weak solution of creasote:

℞ Creasoti, gtt. v;
Aquæ, f℥iv. M.

Sig.—Apply to the eyelid.

If the burn affect the eyeball as well as the free edge of the lid, it will be necessary to prevent adhesion of the edge of the lid to the eyeball (symblepharon). The use of a preparation which contains a very thick oil—such, for instance, as castor oil—is of special service.

In most cases the cornea is also affected, and for this reason I combine castor oil with atropine. As it is necessary to have the oil in its purity, not mixed with water, the solution should be prepared in the following manner:

℞ Atropinæ puræ, gr. ij;
Ol. ricini, f℥j. M.

Sig.—Apply one drop to the eye every hour.

The druggist should not dissolve the atropine in a few drops of water and then mix with the oil, because in this case the effect of the oil would not be as great as if it were free from water. The atropine should be dissolved in a few drops of alcohol, and then mixed with the oil, and then the whole slightly warmed so as to have all the alcohol evaporated. In that case you get a perfectly clear solution of the atropia in the castor oil. If this be applied, say one drop every fifteen minutes or half-hour, not only will the burn of the free edge of the lid be speedily relieved, but the formation of symblepharon will also be prevented.

One of the sequelæ of blepharadenitis is extension of the process to the hair-follicle and subsequent loss of the eyelashes. This occurs sometimes quite early in the disease, and at other times it is only towards the latter stage of the affection that the eyelashes begin to fall out. As long as only a limited number are lost, it is not a serious affection; but if it occur later on, as a result of cicatrization of the free edge of the lid, all the hair-bulbs may be destroyed, and the deformity, known as *madarosis*, will be very great. It is therefore important to attack the inflammation at the edge of the lid as early as possible. The very fact that we are using for the treatment of the disease the oxide of mercury will cause stimulation of the parts and prevent loss of the eyelashes, to a certain extent. After the disease has been relieved, and the eyelashes do not grow rapidly, the stimulating lotion of lavender and rosemary which I have mentioned will act very beneficially. In fact, the use of this after the disease has been relieved will be of great service in preventing a relapse of the trouble, not only because of its stimulating action, but because it dissolves the grease which might possibly be stopping up the mouths of the glands and thus causing irritation.

I was speaking of blepharadenitis due to errors of refraction. This is really of more frequent occurrence than we formerly had any idea of. The credit for calling attention to this fact is principally due to Dr. St. John B. Roosa. During the Ophthalmological Congress which was held in this city, he read an elaborate paper on this subject, showing by numerous cases the relation between errors of refraction and obstinate blepharadenitis. At this time it was doubted very much by our English confrères, but at present the cause is universally accepted. It is, however, unfortunate that only very few of the text-books mention it. Of course it is always comparatively easy to recognize this cause, but it is not always so easy to remove it. The patients are not always willing to wear glasses; it may interfere with their business, or it may be that they cannot pay for the cylindrical glasses which are necessary for the correction of these eye-troubles. In such cases I have recently used, in conjunction with the other remedies mentioned, a weak solution of atropine, dropped into the eye morning and evening:

℞ Atrop. sulph., gr. j;
Acidi borici, gr. x;
Aquæ, f℥j. M.

Sig.—One drop into the eye morning and evening.

I have been led to the adoption of this plan of treatment by the fact that patients who had been suffering from blepharadenitis for a long time, error of refraction being the principal cause, and being placed under the influence of atropine in order to make out the error of refraction, would get entirely well of the blepharadenitis within a few days. Of course it is evident to you how this remedy acts: it paralyzes the power of accommodation; it does away with all straining of the eye fully as effectually as correcting glasses would do. In a great many cases, if the disease be cured once, and the patients are a little careful with regard to the use of their eyes, no relapse will occur, even if they do not wear glasses for the correction of the error in refraction which exists.

PARALDEHYDE MIXTURE.—In order to overcome the rather disagreeable taste of paraldehyde, many corrigents have been suggested. Sutter recommends the following:

Paraldehyde, 10;
Rum (Jamaica), 15 to 20;
Spts. limonis (recent), 1;
Syrupus, 30;
Aqua, 139 to 144. M.

Dose is 100 gm., or a small wineglassful.

Ivon gives this formula:

Paraldehyde, 10;
Alcohol at 90°, 40;
Tr. vanilla, 2;
Aqua, 30;
Syr. simplex, 60. M.

Dose, f℥j to f℥ij.

ORIGINAL COMMUNICATIONS.

SOME COMPARATIVE RESULTS OF TREATMENT IN CHRONIC OSTITIS OF THE HIP.

BY V. P. GIBNEY, A.M., M.D.,

New York.

Read before the American Academy of Medicine at its Annual Meeting, Baltimore, Maryland, October 29, 1884.

TOWARDS the close of the present summer there came under my observation two cases of convalescent ostitis of the hip, which strengthened my conviction that there was much more to be expected from a patient management of these cases based upon a rational pathology than from the employment of any special splint, however highly recommended. And when I was invited so courteously to contribute something to this meeting, I gladly availed myself of the opportunity of talking to a body of men who are not carried away by sentiment and an uneducated enthusiasm, but who come to the study of a subject with a scientific habit,—men who by their very educational training demand facts, and arguments constructed thereupon, for conviction.

These two cases, I say, are to furnish me a theme for the present occasion, and with this theme I propose to illustrate by clinical memoranda some of the results men obtain in every-day life.

Let me premise, however, the statement that what we call "hip-disease," "hip-joint disease," "morbus coxarius," "coxalgia," etc., I prefer to call, for reasons both pathological and therapeutical, *chronic ostitis of the hip*, or *chronic articular ostitis of the hip*. The former perhaps expresses quite as forcibly as does the latter the idea I want my hearers and my readers to entertain of the disease now presented for discussion. The time has already come when a diagnosis can be made of early primary bone-disease, and with the symptoms and the signs of the same it is not my purpose on the present occasion to deal.

Let me preface further my remarks, in order to give a clearer understanding of the subject, with a list of the various therapeutical measures in vogue.

I.—THE EXPECTANT METHOD.

I have not qualified the term "expectant," strong though the temptation be, by a "so-called," or "as it is commonly understood," for the reason that I desire to let the method go by the name its advocates prefer. What we understand by the expectant treatment is a treatment that consists of (*a*) a good hygiene, coupled with the internal administration of drugs supposed to arrest or to change a constitutional vice, known as a diathesis, either hereditary or acquired, commonly called struma or scrofula; (*b*) counter-irritation by means of issues, the cautery, or vesicants more or less severe; (*c*) liniments and the roller in the shape of a spica bandage, compresses of cotton batting often being placed over areas of fulness; (*d*) the non-interference with abscesses until acumination takes place, and then the making of a simple punctured wound through an abnormally thin integument; (*e*) the complete rejection of apparatus of any kind to prevent or correct deformity until one can feel satisfied that the morbid process is arrested; (*f*) intermittent force of an elastic nature, the object of which is to correct deformity that has become fully established.

A long residence in a hospital unalterably committed to this treatment enables me to define thus minutely the method known as expectant. I am pretty sure that I do not convey an erroneous impression.

What I have elsewhere defined as the expectant treatment carried to its legitimate issue differs materially from the present definition.

What then are we to expect in a given case subjected to this plan? Scientifically, what can we expect from a course of treatment which ignores all contrivances for the prevention of deformity?

Even the stanchest advocates of the expectant treatment in ostitis of the hip inconsistently employ apparatus for the prevention and correction of deformity when other joints of far less importance than the hip-joint are endangered by contagious disease.

Next in order comes the

II.—CONFINEMENT TO BED WITH WEIGHT AND PULLEY.

This is the old plan, and has much to commend it, although much more to condemn it. It has the advantage over the expectant plan of not bringing the whole weight of the body on a diseased femoral neck. If we can accept the postulate,

that the lesion is a rarefying ostitis in and about the centres of development, and that this rarefying ostitis, as a rule, terminates in caseous degeneration, we must guard against throwing any weight on this portion of the femur. It must be remembered, too, that in walking upon a limb either really or apparently shortened, the weight of the body is thrown upon this limb at a great disadvantage. We are all familiar with the thud-like step of a hip-limp. Is it any wonder that the trochanter sooner or later appears above Nélaton's line?

It is well known that the weight and pulley, in conjunction with the inclined plane, forms the preparatory treatment to the splint, if much deformity exist. A few weeks usually suffice, and then the long splint can generally be worn with more ease.

III.—THE AMERICAN METHOD.

This has been given the name by our transatlantic brethren, and is known as that plan which aims at portable extension with motion. The weight is thrown upon the perineum, and the splint is practically a perineal crutch. American orthopædists, with few exceptions, aim at producing sufficient traction to prevent any shortening or osseous deformity, and at the same time to preserve the motion at the joint. Just how well this last aim is realized, we are in need of cases and statistics to state with anything like positiveness. I have no hesitation in classing myself among those who believe that any motion permitted a joint whose bones enter into its mechanism only procrastinates the treatment and militates seriously against any proper preservation of function.

IV.—FIXATION OF AND REST TO THE JOINT.

The appliances that have this end in view are numerous, and may be enumerated in the order of efficiency: 1. The "physiological plan," as advocated by Dr. Hutchison, of Brooklyn. This is well known as a high shoe on the foot of a sound limb, and a pair of axillary crutches. The limb is thus raised from the floor and swings, while the weight of the body is thrown on the axillæ. The reflex spasm of the periarticular muscles is sufficient, it is claimed, to fix the joint. Were the patient continuously on the crutches, the indications might thus be fairly met. At night, however, the weight and pulley are used. 2. Apparatus made to encase the hip and thigh, and used in conjunction with the axillary crutches and high shoe. This appliance consists of plaster of Paris, felt, leather, gauze, etc. 3. The long and the short extension-splints, with their various modifications. All these splints are secured by means of adhesive plaster to the limb, by means of which traction is made, and perineal bands fastened to a pelvic band. In reality the hip and the knee are fixed, while the patient walks on the perineum instead of the diseased limb. 4. The splint employed by Hugh Owen Thomas, Esq., of Liverpool, which aims at immobilizing the spinal column, the hip, and the knee, is more in accord with the principles advocated. This splint is incomplete without the crutches and the high shoe. Cumbersome as this apparatus appears to be from the published accounts of the same, I am convinced that a certain class of patients are better protected and get about more easily with such an outfit than we imagine. Let a patient once feel assured that his limb cannot get out of position, and that he can go about with immunity from injury, and he will accustom himself to almost anything. Through the courtesy of Mr. Thomas, I have had an opportunity of seeing some of his patients while under treatment, and they certainly seem contented and get about very actively.

Whether we in this country, satisfied as we are with the use of our portable perineal-crutch splints, will ever consent to fixing the spinal column as well, and to substituting the perineal for the axillary crutch, I have grave doubts. Indeed, I am quite sure that cases managed with the same assiduity that Mr. Thomas gives to his cases will terminate quite as successfully.

V.—OPERATIVE PROCEDURES.

The forcible correction of deformities under an anæsthetic, osteotomies, and excisions constitute the surgical means employed, but means such as these must be supplemented by apparatus in order to retain the advantage gained. Under osteotomies I wish to be understood as including linear osteotomy, drilling, and ignipuncture.

In the remarks I shall make by way of clinical illustration, I shall say nothing of the operative procedures. The subject of

excision is so hackneyed that little good can come out of a discussion. All thinking men are agreed upon its value as a *dernier ressort*, and, when otherwise employed, men differ, and will differ, according to individual experience and the value they attach to statistics.

Touching *brisement forcé*, as a means of correcting a bad flexion for instance, much diversity of opinion exists. The more conservative of orthopædic surgeons do not prefer this to gradual extension; in fact, it is strongly condemned. So far as my own experience goes, I am not a strong advocate of this plan. When one wishes to save time, and can feel reasonably sure of not aggravating or lighting up afresh a bone-lesion, then it may be done. Ordinarily, however, it is much safer, and consequently more commendable, to resort to gradual processes.

The theories upon which simple linear osteotomies and ignipuncture are based make these operations eminently justifiable.

Patients, as a rule, outside of hospitals are loath to submit to operations of this nature, and the results thus far published are not sufficiently reassuring to give one a strong argument for appeal to the lay mind. The pathology as yet rests on too insecure a basis. Men still talk about "distention of the capsule," "erosion of cartilage," "extension of the inflammatory process to the bone," and such-like theories of a bygone day, as if they were facts. The professional mind is not yet educated up to a sound pathology.

Drilling of the head and neck has not been employed always on properly selected cases, and the results therefore give one an unfair impression. Diagnostic skill has not been brought to bear with sufficient force. However one may favor this method of dealing with an early ostitis, for many reasons it seems doubtful whether it will ever become a popular operation. Elsewhere I have published some results furnished by my friend Mr. C. McNamara, of London.

For results of osteotomy for the correction of bad positions, I cannot do better than refer to the valuable work of my friend Dr. C. T. Poore on "Osteotomy and Osteoclasis," published by the Appletons.

To illustrate some of the results gained under the different methods non-operative, I shall incorporate a few brief notes of cases taken from my records.

(*A*) A young lady is now under my observation who has from the beginning of her lameness, many years ago, been under expectant treatment. She is in fair health, and is able to walk with much ease when not harassed by neuralgic pains,—a sequel to her ostitis. There is anchylosis at an angle of about 150°,—a comparatively good result as to position,—while the amount of adduction is not by any means great. There is only one inch shortening. Over the trochanter major is an open sinus, which to my own knowledge has been in existence for five or six years. The discharge is not profuse; on the contrary, it is scarcely sufficient to require at all times a dressing. What annoys the patient most is an almost constant pain in the outer portion of the thigh and around the knee. This pain, too, is aggravated by walking. But for this annoying feature and the pertinaciousness of the sinus, the result would be one better than the average.

Take now a case treated after the same plan nearly forty years ago. One year ago I had under treatment for fibrous anchylosis of the hip the following case:

(*B*) A man, 47 years of age, who gave me this history. When quite a lad, he had a disease at the hip, and was treated by blistering and occasional periods of rest. He was nearly a year an invalid,—was "laid up off and on." He never had any abscess, and gradually "the disease wore away," but the hip has always remained stiff. It never troubled him to any great extent, however, until 1880, when, from exposure he thinks, he began to walk with less facility. Finally, he became so lame and suffered so much pain about his hip that he sought relief in a hospital. Failing to get the desired relief, he tried other hospitals. When I examined him, I found only an inch shortening, with the usual amount of thigh-atrophy,—viz., two inches. The limb was rotated outwards over an arc of about twenty degrees, and he walked exactly like one who was convalescing from fracture of the femoral neck. He could flex the hip to an angle of 120° with a little effort, and, on extending from this position, he rotated the limb outwards, the act of extension being accomplished by a slipping of the head over a roughened surface. This movement I had him repeat several times, as it was to me a very odd "trick" on the part of the patient.

In seeking a solution, I could come to no other conclusion than this,—viz., that in flexing the thigh he must produce a subluxation of the hip downwards and backwards, which subluxation was overcome with this "click," or bony slipping, on extending the limb.

These movements did not excite any special pain, but walking and climbing stairs did excite pain, and altogether he was a great sufferer.

It occurred to me, after exhausting counter-irritants and the various forms of electricity, that relief might be afforded by freeing the hip of what adhesions might exist in this locality. Accordingly, I moved the hip one day, under an anæsthetic, to 90° in flexion and 170° in extension, but was unable to make any abduction or rotation. He did not get any near or remote relief from this operation. He was made worse.

Occasionally one meets with old cases that have been subjected to issues during the progress of the disease.

(*C*) In June of the present year a case was referred to me for advice regarding the best means of controlling a pain in the gluteal region. The patient was 28, and when five years of age had developed ostitis of the hip, for which she came under the care of distinguished surgeons. Issues were employed, cicatrices of which I found in the gluteal region. One of the issues existed for two years. No splints were ever used. Her treatment extended over a period of three years, but it was five years before she was regarded as cured.

From her tenth year until December, 1883, she had no relapses, and scarcely any symptoms that could be regarded as evidences of an exacerbation.

Last December she was unusually active, and, after a hard day's work in household matters, suffered excessively about the hip for a couple of days. A few days' rest in bed brought about relief, and her chief annoyance since that time has been her inability to walk moderately short distances without exciting pain in the gluteal region. She grows weary very quickly.

Her physical condition now is: a good physique; a marked lumbar lordosis; a thigh flexed at 135°,—*i.e.*, on overcoming the lordosis; two and a quarter inches shortening as measured from the anterior-superior spinous process; one and three-quarter inches shortening as measured from the umbilicus; two inches atrophy of the thigh; no joint-tenderness, and a very fair gait. Altogether, the result, for an anchylosed hip, is very good, and, but for the periarticular sensitiveness, would be all that one could expect.

These cases afford practical illustration of the kind of hips one may get by the old method of treatment. I regret to say that these are selected cases. I should like to tell of a case referred to me yesterday by the head of a noble charity:

(*D*) A little girl, flaxen-haired and wan, I found seated in the well-known high chair around which so many loving memories of our childhood fasten themselves, steadying herself as best she could by the foot-board and the arms of the same. Thus seated in apparent comfort, she scarcely seemed the patient I had been called to see. But could you have heard the piercing, the agonizing shrieks that issued from this frail human specimen as the mother took her into her arms, could you have seen the haste with which she grasped the knee with both hands, could you have seen how tearfully she resisted any attempts at moving either limb, could you have seen how acutely flexed both thighs were held, you would not believe me if I told you that this case developed disease of both hips directly under the surgeon's eye and while under treatment for lumbar caries, and that the signs of bone-disease at the hips developed slowly and according to rule.

This is not an isolated case. I could make a lengthy paper with the transcription of similar records. The time has passed when we can afford to disregard the appliances science has thrown into our way.

Take now, by way of illustration, a few instances wherein the long splint has been used:

(*E*) A boy, 14 years of age, was seen after three years' treatment, with this result: The health excellent; no pain for a year or more; six open sinuses, but the discharge therefrom is very light; the limbs are parallel, there is no shortening, and the patient walks with ease, although a little lame. The limb has been retained in good position, and no shortening has been allowed, while at the same time he has been walking all the while. These open sinuses give the doctor very little anxiety, and the boy has come to look upon them as of trifling import. The fact is that sinuses leading to carious bones may exist for several years without any grave significance. Very often they finally close permanently.

Cases come under observation, and histories are given, of treatment such as the general surgeon employs,—viz., a combination of the weight and pulley and portable apparatus. The text-books on surgery commend in strong terms this combination.

(*F*) In August a patient was referred to me from Kansas City by a gentleman who ranks high as a surgeon, and in his letter he remarked that during the progress of treatment he thought the result would be exceptionally good as to motion and freedom from shorten-

ing. This is what he did. Two years and a half ago, three months after the first signs of disease in the hip, he applied a long splint. The patient wore this awhile, then had weight and pulley in bed, then the splint again. Later an abscess formed, but this was treated according to surgical principles.

This is the result:

A well-nourished, hearty-looking girl, 8 years of age, on a crutch, with one and a quarter inches real shortening of the limb and three and a half inches practical shortening. The top of trochanter major is one inch above Nélaton's line; the angle at which it is possible to extend the thigh is 125°, to flex 75°. The usual amount of atrophy exists. A cicatrix on the upper and outer aspect of the thigh marks the site of the abscess. The disease seems fully arrested, and the child can walk on the limb, but has become attached to the crutch, and it is hard to make her abandon this aid in walking.

In July I saw a patient from Cincinnati, Ohio, with the following therapeutical history:

(*G*) Two years ago, very soon after the first signs of an ostitis of the hip developed, a Taylor's long splint was applied, and this she wore three weeks. It gave place to the weight and pulley, which was continued for fifteen months. Towards the close of this period an abscess formed and was opened, a sinus continuing eight months. In this time she wore a plaster-of-Paris bandage for three weeks. Since the removal of the plaster she has been on crutches.

The outcome of the above treatment is: She keeps the thigh flexed on the pelvis at an angle of 80°, making the practical shortening of the limb two and one-half inches, while there is no shortening as measured from the anterior-superior spines, the limbs placed symmetrically. There is also a marked degree of adduction, and a deep cicatrix on the outer side of the thigh. The joint-surfaces seem smooth, and there is a small arc of motion in all directions. Passive motion excites reflex spasm in the adductors, which spasm indicates that the disease is not yet fully arrested.

Now, these two cases represent very fairly the average result of bone disease about the hip when managed, as the case usually is, by two or more surgeons. And yet, as time goes on, they will walk with a much improved gait.

To show the termination of some cases that are under the care of orthopædic surgeons who differ as to methods of treatment, a brief narration of the history of a patient I saw first in 1882, while an interne of the Hospital for the Ruptured and Crippled, will suffice:

(*H*) The girl was then 15 years of age, and had worn a long hip-splint, applied by an accomplished specialist, for three years. The limb was parallel with its fellow, was one inch short, but the dropping of the pelvis on this side reduced the practical shortening to nil. There was no atrophy of the limb, no abscess, and the disease, although of long standing, seemed to be undergoing resolution. Coming to the hospital, she naturally had to give up the splint, and took to crutches, inasmuch as she was afraid to risk the limb alone.

From June, 1882, to February, 1884, the "expectant" treatment was pursued, and at the end of that time she had, as a result, one and a half inches real shortening, one inch practical shortening, an inch and a half atrophy, inability to walk without the crutches, and a stiff hip in the straight position.

In February she entered the New York Hospital for the purpose of having an operation done for the relief of the anchylosis. The hip was quite freely moved under ether, and the weight and pulley employed for six weeks, passive motion without an anæsthetic being employed occasionally during that time.

Since June I have had her under observation, using the long splint again, and with this she gets about without other aid. The *brisement forcé* in February has been attended with negative results.

To sum up, then, the points of interest in this case: 1. Long splint for three years employed by an expert. 2. Treatment by crutches and liniments for eighteen months at an orthopædic hospital. 3. *Brisement forcé* at a general hospital. 4. Long splint again. 5. A strong probability that she has five or six years of splint-treatment yet in store.

However prejudiced one may be against mechanical treatment, he cannot escape the conviction that had this case continued the long splint awhile longer, progressing favorably as it was, a good result would the sooner have taken place.

Little is heard now of the physiological treatment so ably advocated by Dr. Hutchison, of Brooklyn, a few years ago. My own results have not been such as to encourage me to hope for any great success.

(*I*) Recently I have examined a little patient with whom I began the crutch-and-high-shoe treatment fully three years ago. I had the case under observation quite closely, and the directions have been followed with precision. When the plan was adopted the case

had already reached the second stage. Six months afterwards an abscess appeared in the iliac fossa, and was distinctly made out by myself. Six months later it had disappeared. This child had very little pain during the whole course of treatment.

The condition now is, a comparatively easy gait without pain, one and a half inches shortening as measured from the anterior-superior spinous process, and four inches as measured from the umbilicus (four inches practical shortening). Can flex quite as freely and quite as fully on this side as on the sound side, while extension is limited to 120°.

This, you see, is not a fine result; and yet I am compelled to bring it forward as one of my best, if not the best of any yet obtained by means of the "Physiological Method."

To Mr. Hugh Owen Thomas, of Liverpool, I am indebted for the opportunity of examining a sample case under his care.

(*J*) One day early in September a child was brought to my office with a note from Mr. Thomas. I soon learned this history.

About three years ago I had examined the case, when it was in its incipiency, pronouncing a diagnosis without hesitation. I did not see it again, but the child was taken to Dal Cin, the bone-setter, in her Italian home. Here she remained nine months, getting poultices and an occasional stretching. Thence to Liverpool, where the case came under the care of Mr. Thomas, who has had it under his personal observation for two years, with this result:

A very active child, still wearing the fixation-splint employed by Mr. Thomas, supplemented by a three-inch high shoe on the sound foot and a pair of crutches; the limb parallel with its fellow, one inch shorter and one and a half inches smaller; the joint apparently anchylosed. There was no soreness or pain, and a cure seemed long since attained.

We had here a straight limb, a short limb, and a stiff joint. Curiously enough, three days later, another case was brought me for my opinion as to the propriety of suspending all treatment, and this was the coincidence:

(*K*) The family-name of the child was the same as the one whose case I have just reported. The disease began about three years ago. I had seen the child and diagnosticated the lesion early, and had not had the opportunity of treating the same. This child was taken to an orthopædic establishment in a neighboring city, where she was placed in bed with a weight and pulley attached to the limb, and here she lay for sixteen months. At the end of this period crutches and a high shoe were employed for six months. The result is almost identical with that in the Liverpool case as to position, atrophy, shortening, and stiffness.

Both were good, yet far from perfect. In both treatment was begun comparatively early, both were managed with much care, and both reflect credit on the surgeons in charge.

In studying comparative results, I am forced to the expression of the following convictions:

1. The "expectant" treatment is not, in an orthopædic or a surgical sense, any treatment at all. Cases that have no medical or surgical attendance whatever are followed, so far as my own observation goes, with just as good results.

2. Traction with motion is based upon a false pathology, and does not, in my opinion, do what its advocates claim for it. The motion is certainly not as great, as a rule, as one would be led to expect.

3. Fixation and rest, when properly carried out, yield better results, I believe, than any other plan.

4. The key-note in the treatment of ostitis of the hip is not the splint employed, not the crutch, or the high shoe, but it is the management of the case. Some men can get admirable results with any kind of splint. The case must be closely watched, the apparatus must be kept fully up to its duty, the indications must be met, and one must not grow impatient, because time is an important factor.

Let one be early impressed with the tediousness of the case, and let him also make up his mind that the case must be managed rather than treated with any special form of apparatus.

REPORT ON OPHTHALMOLOGY.

BY ALBERT G. HEYL, M.D.,

Ophthalmic Surgeon to the Episcopal Hospital.

BRAIN-ABSCESS WITH DOUBLE OPTIC NEURITIS.

DR. GEORGE S. NORTON reports the following case. William H., æt. 22, received a blow on the head from an ice-hook. For two weeks he was confined to the house, part of the time in bed. He seemed, however, to recover

from the effects of the blow, but one and a half years later began to suffer from severe and almost constant headaches. A few months later he was obliged to stop work on account of a severe "cold and fever." In a few days the R. E. became very much swollen, as well as the corresponding side of the head. Then daily muscular spasms for nine days supervened. They ceased, but recurred again in about a month, lasting for three days. About this time blindness was noticed in the R. E.; paralysis of speech and also of the extremities occurred. L. E. became blind about five weeks after the blindness was first noticed in the R. E. Three weeks after this the convulsions returned. Examination at this time revealed the following: "Patient lies helpless in bed, only slight movements of either arms or legs being visible. Lower jaw is fallen, apparently from paralysis of the masseters. He seems rational, but is unable to speak. Practically blind in each eye. Much swelling of the lids of the R. E. Some chemosis of the conjunctiva, with prominence of the eyeball. Cornea in a state of suppuration. The right side of the head is much swollen and hard. At the edge of the orbit, near the outer canthus, is a fistula from which pus escapes. In the L. E. the pupil is widely dilated, the media are clear. There is a characteristic engorged papilla." About a week later patient became comatose and died.

The autopsy showed caries of the orbital plate of the frontal bone, corresponding to the apex of the lesser wing of the sphenoid, by means of which an opening had become established into the right orbit. A large closed sac of pus occupied the place of the right middle cerebral lobe, no trace of which remained.

[It is a question in the above case whether the carious bone was primarily affected by the injury or not. The pus-sac was in contact with, but not adherent to it; no communication existed between the former and the orbital cavity. These facts, together with the acute brawny swelling of the right side of the head, suggest the following explanation. The caries of the orbital plate was simply due to the pressure of the pus-sac; it seems not to have been accompanied by adhesive inflammation; possibly, therefore, the part which was played by the caries in the production of the orbital inflammation may have been very slight. The train of symptoms seems to point rather to a metastatic inflammation of a venous sinus, involving secondarily the ophthalmic vein and its branches, and also the veins of the diploic structure of the right side of the head; the veins of the diploë communicate both with the sinuses of the dura mater and with the pericranial veins. It is therefore not so difficult to explain the brawny swelling of the side of the head, a symptom, so far as the reviewer's experience goes, not usually associated with cases of orbital abscess. H.]

GLAUCOMA FROM HOMATROPINE.

Dr. Sachs reports the following case. The patient, a blacksmith, æt. 58, applied for a prescription for glasses. The anterior chambers were shallow, pupils of normal width. Tension also normal. The right lens was slightly cloudy, and in order to examine this more closely a drop of a one-per-cent. solution of homatropine was instilled. Fundus, visual field, and color-sense normal on each side. Twenty-six hours later he appeared, making the following complaint. Almost immediately after leaving the clinic, pain occurred in the right brow and temple, with decrease in sight. There was also the sensation of giddiness. The symptoms, however, were not severe enough to cause great annoyance to the patient. Examination showed that a typical glaucomatous affection of the R. E. existed. Cornea, especially the central part, steamy. Anterior chamber narrow to the same extent as before the instillation; pupil rigid and dilated to five and a half millimetres; fundus dimly seen, but the jumping arterial pulse of glaucoma was easily observed. Tension very much increased. Vision reduced to counting fingers at three metres. Visual field narrowed on the temporal side. Immediately several drops of one-per-cent. solution of eserine were instilled in the R. E. One hour later the glaucomatous symptoms had vanished; cornea was clear, pupil reduced to one and a half millimetres in diameter; tension less than that of the left eye. Vision in large measure returned. In two days, with further use of the eserine, the vision attained the amount existing before the instillation, and the visual field became normal in extent. The eserine was stopped. In course of six days the pupil was nearly as wide as that of the

L. E. The tension of R. E. still a little less than that of the L. E. The fundus was normal. Further examination of the patient drew out the fact that for four years he had experienced at times, especially when working hard, a dimness of sight which would last perhaps fifteen minutes; there would be also giddiness, but not the slightest ocular pain.—*Centralblatt f. Augenhlk.*, September, 1884.

[This case recalls again the practical lesson of using mydriatics with caution in patients over fifty years of age. The ill effects from atropia-instillation in glaucoma, the fact that acute glaucoma has been developed by duboisia,* and the above case produced by homatropine, may well lead us to suppose that, where the predisposition to glaucoma exists, *any* mydriatic may bring on an attack. It is an important practical question, in view of this, whether it is a wise thing to use a mydriatic in refraction cases over fifty years of age. This very case of homatropine glaucoma shows how impossible it is to determine from the condition of the eye itself whether the mydriatic may be used safely or not. The reviewer inclines to the belief that it is safer to be satisfied with the best correction that can be given without the mydriatic in such cases. In younger individuals the use of the mydriatic seems as yet indispensable. H.]

PEMPHIGUS OF THE CONJUNCTIVA.

Steffan, of Frankfort, reports the following instance of this rare affection. A woman, æt. 73, presented herself for treatment on account of an inflammation of the L. E. There was a moderate amount of conjunctival inflammation, with a peculiar cicatricial process running on in the inferior conjunctival sac. Some of the cilia of the lower lid were drawn inwards, thereby irritating the cornea. With continuance of the inflammation the inferior conjunctival sac became shallower, finally disappearing in the outer third. The cause of this cicatricial process could not then be discovered. There was no evidence of granular conjunctivitis. The condition was evidently that described by Gräfe as *essential shrinkage of the conjunctiva*, and by Stellwag as *syndesmitis degenerativa*. The R. E. then became inflamed, and the same cicatricial process began to develop in the inferior conjunctival sac. Finally scarce a trace of the sac remained, the lower lid being closely united to the ball. A month after the inception of the disease an eruption of typical pemphigus vesicles occurred, first on the left, then on the right eyelid. On the latter, during one and a half years' observation, the vesicles would come and go. There also occurred during this time an affection of the throat which was diagnosed as pharyngeal pemphigus. Steffan draws the conclusion from his case that this confessedly obscure condition of conjunctival shrinkage is really the result of a pemphigus eruption, and that the proper name for the condition is pemphigus conjunctivæ.—*Klin. Monatsblätter*, August, 1884.

Schweigger reports a case of the same kind. The patient was a robust old man. There was marked injection of the scleral conjunctiva of each eye, a partial shrinkage of the inferior palpebral conjunctiva, and disappearance of the inferior conjunctival sac, while the upper lids were healthy. A few months later a pemphigus vesicle developed itself on the right scleral conjunctiva. For years previous similar vesicles had been observed on the mucous membrane of the mouth.—*Centralblatt für Prakt. Augenheilkunde*, June, 1884.

ANOMALIES OF THE OPTIC DISK.

I. Coloboma.—Remak describes the following case. The patient was a woman æt. 26. Both eyes have optic disks of about the same diameter, and are slightly hypermetropic. The coloboma was in the R. E., the left optic disk being normal. The right disk was embraced by a grayish-white staphylomatous crescent situated to the nasal side, and including two-thirds of the disk-circumference between its horns. In the middle of the disk was a deep physiological excavation with a diameter about one-third that of the disk. The edge of the excavation was sharply defined; at the nasal side a shallow depression in the disk-surface communicated with the excavation, and also with a split in the nerve-tissue. This last extended to the margin of the disk. There was no other evidence of defective development in the eye. A list of eight papers bearing on the subject is appended to the history of this case.—*Centralblatt f. Prakt. Augenheilkunde*, August, 1884.

* Acute Glaucoma induced by Duboisia. Reported by Albert G. Heyl, M.D. Amer. Jour. Med. Sciences, April, 1882.

II. Malformation.—Stood reports two cases: (*a*) Patient was a woman, æt. 40. V. in each eye about normal. With the ophthalmoscope the left fundus was normal. On the right papilla a vertically-oval bluish-white spot was noticed close to the margin; its horizontal diameter was one-sixth to one-eighth that of the papilla. It was in the temporal half of the papilla. From its appearance it might readily have been taken for a cyst, but close examination showed it to be an excavation with an overhanging rim. Examination of field showed that a scotoma existed between the *blind spot* (Mariotte) and the fixation-point. There was scarcely any indication of the ordinary physiological excavation. (*b*) In this case an excavation similar to that described in the first patient was observed close to the temporal margin of each disk. The excavations were connected with large physiological cups occupying the temporal halves of the disks. In the R. E., some distance below the papilla, a well-marked choroidal coloboma was observed. In the L. E. the choroid was perfect, with the exception of slight pigment-maceration about the macula.

[Remak's case seems clearly due to defective closure of the fœtal cleft, as the depression connects with a fissure running to the nerve-margin. Stood's cases seem to have a different origin. That it was fœtal seems to be indicated by the co-existence of a choroidal coloboma in the second case. The evident isolation of the depression, in the first case, from the porus opticus points rather to some local disturbance of nutrition, by reason of which the level of the disk was caused to sink. The resemblance of these excavations to those seen in glaucoma is worthy of note. H.]

COLOBOMA OF THE MACULA LUTEA.

Remak observed the following case. Patient æt. 16. R. E. was myopic 3 D; otherwise normal. In the L. E. the macular region was occupied by a sharply-defined oval spot; its vertical diameter was 2 PD, its horizontal 3 PD. This area in spots was intensely white, in others covered with accumulations of pigment; several choroidal vessels were also observed upon it. A branch of the arteria retinæ superior ran across the spot through the pigment-accumulation. There was no trace of choroidal or iris coloboma in either eye. The vision of L. E. was much decreased, fingers being counted at twelve feet.—*Centralblatt f. Augenheilkunde*, September, 1884.

[The etiology of these cases is not as yet clear. The prevailing opinion is that advanced by Manz,—viz., that they are due to imperfect closure of the fœtal cleft. This is confessedly a doubtful hypothesis. It is perhaps impossible to reconcile these defects in the macular region with the position of the fœtal cleft,—viz., downward or downward and inward from the disk. Nor does the supposition that the ball rotates during gestation seem materially to strengthen the hypothesis. It seems to the reviewer that it is illogical to refer the various forms of congenital tissue-defects to the fœtal cleft, as if there must be necessarily some connection between them. Certainly these tissue-defects do not imply the previous existence of a congenital cleft, but rather that for some reason the tissue-formation has failed to attain its full growth. The cause may be sought in the defective state of the fœtal blood-vessels contiguous to the defective tissue. H.]

DETACHMENT OF THE UVEAL PIGMENT IN DIABETES MELLITUS.

Hirschberg reports the following experience. A woman, æt. 54, with double cataract associated with diabetes mellitus, had a preparatory iridectomy made on the R. E. Operation was performed without difficulty, and there was no posterior synechia. Almost the entire pigmentary layer of the portion of iris removed remained behind. Five days later a preparatory iridectomy was made on the L. E., with the same experience. The pigment-layer was removed by the forceps. Hirschberg states that among hundreds of iridectomies he has observed this phenomenon but once, and then in an anæmic girl who had lamellar cataract.—*Centralblatt f. Augenheilkunde*, June, 1884.

[This clinical experience may be taken in connection with the observation of Becker made on a young girl, who died of diabetic coma two days after preliminary iridectomy on one eye and extraction on the other. The uveal pigment-cells were found very greatly swollen and loosened. H.]

PERIMETERS.

Dr. Dubois-Reymond describes a new

perimeter for testing the visual field. The main advantages ascribed to the instrument are absence of complicated mechanism and cheapness of price. It has the arc and chin-rest of the instrument of Förster, but the movable test-object is superseded by an object on the end of a blackened staff held in the hand and moved along the arc. The maker is Hr. Mechaniker Pfeil, Dorotheen Strasse 35, Berlin. The price is forty-six marks.—*Centralblatt f. Augenheilkunde*, September, 1884.

Dr. B. Alexander Randall, of this city, has recently devised a perimeter consisting of a brass arc backed with iron and an adjustable chin-rest, mounted upon a base of oak. The object is moved along the arc by an endless cord worked by a milled head near the centre of rotation. It seems to be much lighter than the heavy German instruments, and to fulfil the same purpose. The cost is ten dollars; the manufacturer, Mr. Ivan Fox, 1635 Chestnut Street, Philadelphia.—*Medical News*, October 11, 1884.

Priestley Smith describes a new, self-registering perimeter. It is an improved form of the instrument previously devised by him.—*Centralblatt f. Augenheilkunde*, June, 1884.

ELECTRIC LAMP FOR OPHTHALMOSCOPIC WORK.

Birnbacher describes an illuminating apparatus specially adapted for ophthalmoscopic work at the bedside. It consists of a Swan lamp enclosed in a cubical casket of forty millimetres' dimensions. The front face of the cube is open, and has connected with it a tube thirty-five millimetres in diameter and twenty millimetres long. Sliding upon this is another short tube, which has a convex lens set in it; the latter can thus be moved toward or away from the lamp, and thus parallel, convergent, or divergent rays caused to issue from it, as may be desired. The electric current is applied by a small and compact battery of six "Faure Sellon-Volkmar" accumulators. Thus the light may be maintained for two hours at a time. The lamp may be also used for microscopic work, the light being tempered by a blue glass in front of the lamp. It also may be used at the operation-table when artificial illumination may be required.—*Centralblatt f. Augenheilkunde*, June, 1884.

REPORT OF A CASE OF ACCIDENTAL HEMORRHAGE COMPLICATED WITH RIGID OS, RESULTING IN THE DEATH OF MOTHER AND CHILD.

BY G. MAXWELL CHRISTINE, A.M., M.D.,
Philadelphia.

THROUGH the courtesy of Dr. J. D. Nash, the physician in charge, I have received permission to present the following account of a remarkable case. In a glance over many medical works, I have been unable to find anything like it, and there are probably few physicians who have had cases presenting similar features.

On September 8, Dr. Nash was summoned to Mrs. G., primipara, believed to be in the seventh month of her pregnancy. She stated that during the latter weeks of her pregnancy there had been some œdema of both legs, but this now gave her no unusual annoyance. For some hours the patient had suffered from intense pains attending a severe attack of diarrhœa. She was much prostrated; her face was pale and her pulse weak; but there were no signs present of labor. Under appropriate treatment the pains were relieved and the diarrhœa checked. For the next week she was enabled to go about her household duties, and those who saw her state that nothing unusual marked her appearance except pallor; but on the 14th, at about 2 P.M., the doctor was again summoned to Mrs. G., who had then been in labor for some hours. He was at once struck by her marked pallor and the weakness and rapidity of her pulse. Pains were occurring every five minutes. The appearance of the bed and the cloths which had been used showed that there had been a considerable loss of blood, and examination revealed that there was still slight bleeding. The os was high up, looking to the left, narrow, and exceedingly rigid, particularly during a pain. It was neither dilated nor dilatable, and the doctor very truly said that "nothing had ever so reminded him of a button-hole as that os." The opening was surrounded by a tough, unyielding, ring-like ridge, which was like the edge of a coarsely-made button-hole. The index finger could be introduced with much difficulty through this narrow slit up to the second joint, but it always gave rise to much pain and strong uterine contractions. The membranes she thought had been ruptured, but what had been supposed by the patient to be a breaking of the bag of waters must have been a gush of blood. The head could be felt quite high up, and during a pain made some movement as if to descend. The hemorrhage suggesting placenta prævia, the finger was swept around within the os to discover the presence

of the same, but there was no placenta within reach.

No correct estimate can be given of the amount of hemorrhage, but, judging from the fact that there had been a continual flow, with an occasional gush, for some hours before the doctor was called, the loss must have been great. The wasting now was not alarming, and the finger kept within the os easily checked it. But after retaining the forefinger within the os as a tampon for an hour, finding no change taking place in the condition of the os, and that a second finger could not be admitted, the doctor, at about three o'clock, determined to replace the use of the finger by a tampon of cotton and meanwhile call in assistance; but in half an hour so much blood was found to have oozed through that the tampon was removed.

After much manipulation a second finger was now partially inserted. The two fingers now effectually closed up the os, and served admirably as a tampon. They were therefore retained in this position for three-quarters of an hour, an effort all the while being made to dilate the os enough to admit a third finger. At the end of that time, finding his efforts to pass in another finger ineffectual, and that his fingers had become temporarily paralyzed from the constant pressure kept up, the doctor was obliged to desist.

It was at this time that I arrived. Dr. Nash hurriedly reviewed the case and requested me to make an examination. I found that there was still hemorrhage, but not very abundant. The os looked backwards and to the left, and was a little difficult to reach. It presented the button-hole character as described, but had evidently contracted after the doctor removed his two fingers, for I could insert but one. The membranes were intact, and the head was still high up. Pains occurred every four or five minutes, at which times the os would contract very forcibly, but it was very evident that they were having no effect in dilating the os. At last, after tugging at the os for many minutes, I succeeded in partially inserting a second finger. The membranes now slightly bulged during a pain, and, as the hemorrhage still continued unless controlled by a tampon or by the fingers, I ruptured them. There was but a slight escape of water, and this appeared to be unmixed with blood. We hoped, after the rupture of the membranes, that the head would further descend and fill up the os; but this did not take place, and some bleeding continued.

Belladonna ointment was now plentifully smeared upon the os, and the use of the fingers as dilators still persevered in; but no immediate effect was secured. In order to give the belladonna time to act, and meanwhile continue the control of the hemorrhage, we again employed a tampon of cotton, which was kept in place by a T-bandage. A pledget of cotton was covered with the ointment and placed against the os before the tampon was introduced. The tampon was allowed to remain for an hour, when it was removed. The os had not changed, and was as rigid as before. The head had not descended very much, though its position was normal and the pains fairly strong.

Stimulants were administered, and, to promote better circulation in the cold limbs, bottles of hot water were placed at the feet and along the legs.

At about seven o'clock, Dr. W. A. Chandler arrived. By his advice, milk was administered in addition to the whiskey, and hot-water injections directed against the os. These injections were kept up for some time, but without evident effect. The belladonna ointment was again resorted to, and efforts at dilatation made with the fingers. When the fingers of one became tired, another took his place, and so the three physicians alternated in their efforts to bring about dilatation. A suppository, which had been ordered prior to the arrival of Dr. Chandler, containing one grain each of the extract of opium and belladonna, was inserted into the rectum. Efforts to make the uterine contractions stronger and more effective were made by pressure over the uterus, and attempts made to bring the head lower down. At eight o'clock the os had so relaxed as to permit the skilful introduction by Dr. Nash of a small pair of Simpson forceps; but, immediately following their introduction and locking, the os again firmly contracted and further complicated matters by forming a tough and seemingly unyielding ring around the shanks of the forceps, through which it was at first impossible to bring the head. It was therefore with much difficulty that the head was brought down to the perineum, which was not accomplished for three-quarters of an hour. At this point the instruments were removed and nature made to effect the rest of the delivery, which it did in about ten minutes, without a tear of either the cervix or perineum.

The child was dead, as was expected from the fact that fœtal movements had ceased more than three hours before. It was not injured in any way, nor did it show any marks of the forceps. It was of the average size of a seven and a half months' fœtus. The bones of the head were softer and the fontanels larger than usual, but in all other respects it was normal and healthy. After the birth of the child a little time was allowed to elapse before the expression of the placenta, for there was no more than ordinary bleeding. The placenta was finally removed without difficulty, perfect uterine contraction secured, and a binder and compress applied.

An examination of the placenta showed that one-third only of its surface was normal in appearance; the other two-thirds was dark with clotted blood, and in marked contrast

with the normal condition of placental tissue. This changed portion of the placenta had evidently been separated from its uterine attachment, and was conclusively the cause of the hemorrhage. This hemorrhage was twofold, coming, as it must have done, from both the uterine and placental surfaces, and because of the latter character the death of the child in utero is very readily accounted for.

For some little while after the removal of the placenta our patient rested very easily. She was perfectly rational, complaining only of a little smarting at the genital fissure, and was disposed to assist herself if she had been permitted. The uterus had firmly contracted, and the amount of bleeding continued to be normal. Her pulse was rapid, her features blanched, and her extremities cold; but there was cause for believing that, under the stimulating influence of whiskey and milk and the observance of quiet, she would rally very well. We were, of course, afraid of shock, but at this time we had little reason for expecting it to be very great. However, this favorable condition of things did not last very long, for symptoms set in which excited alarm. The pulse became so rapid and feeble as at times to defy counting, the speech became wild and delirious, and the patient restless and determined to get out of bed. She became oblivious to the fact that her child had been born, and complained that we were pulling too hard upon the forceps. The extremities became colder, the hands lost their warmth, the lips became deathly, and the eyes gradually assumed a staring look. Her strength slowly gave way, and at about half-past nine it was evident that death was creeping upon her. Consciousness ceased, and the respirations became stridulous. Tincture of digitalis and carbonate of ammonium were ordered, the administration of stimulants continued, and every possible effort made to arouse her; but all was in vain. At a little after ten o'clock she died.

REMARKS.—The above case is interesting only because of the complications. The mortality of accidental hemorrhage, *per se*, unless concealed, is not very great, but the complication with a rigid os affects very seriously the prognosis. If the case had been one simply of hemorrhage, the treatment would have resolved itself into the dilatation of a normal os, the administration of ergot to its physiological limit, the firm contraction of the uterus by abdominal pressure, and the consequent speedy delivery of the child. Ordinarily this is very quickly done; but in the case under consideration six and a half hours' tedious effort was requisite to bring about such a result, and then, unfortunately, too late to save either mother or child.

A rigid os is at all times troublesome, but the worst thing to fear in such cases is at the most a protraction of the labor. So that either of these two conditions occurring alone need not necessarily occasion alarm; but united they offer cause for grave apprehension.

The use of ergot in cases of accidental hemorrhage is commendable, but its undoubted action upon the circular fibres of the cervix contra-indicates its use when there is rigidity of the os. Prior to my visit to the patient one drachm of the fluid extract of ergot had been administered, but until the head was brought down upon the perineum no more than this one dose was given.

If we could have had a Barnes' bag, dilatation *might* have been brought about a little earlier, but, owing to the circumstance that the day was Sunday and we were far removed from anybody who had one in his possession, none could be procured. However, the use of the fingers very rarely fails to secure dilatation, and it is doubtful if a Barnes' bag would have given us any very efficient aid. The os was so contracted the greater portion of the time that it was a question whether a Barnes' bag could be introduced.

Chloroform and chloral could not be used, on account of the condition of the patient, and nipping the cervix with the scissors to allow the immediate application of the forceps did not meet with the approval of all the physicians.

One other complication which contributed to the prolongation of the labor was the position of the os. At each examination it was necessary to carry the finger far up to the right and pull the os forward to the median line, and keep it in this position as long as possible. This condition was evidently due to a malposition of the uterus at the time of pregnancy, development then not taking place symmetrically.

The cause of the placental separation could not definitely be ascertained. We had no knowledge of any accident that might have caused it. It has been mentioned that on the 8th of the month our patient had a severe attack of pain with diarrhœa, and that during the latter months of her pregnancy she had œdema of the lower extremities; with this œdema there may have been albuminuria. Our patient was anæmic during the last week,

but her pale appearance was attributed to the results of the diarrhœic attack. It is impossible to do more than conjecture as to whether any one of these conditions gave rise to the placental separation. The patient was exceedingly anxious to have her child, and, when questioned, denied having made any attempt at abortion.

The death of the child was evidently due to hemorrhage.

The death of the mother was unexpected. Whilst the loss of blood prior to the visit of Dr. Nash was great, and would soon have ended the life of the mother if not controlled, the loss of blood from the time of his visit to her death was not more than many women suffer in childbirth without showing the least symptom of depression. Her strength during the entire ordeal was remarkable, and after the birth of the child was for several minutes of such a character as to be cause for congratulation. The weak pulse, however, and the cold extremities were sufficient warning for us to anticipate a reaction. But symptoms of shock quickly supervened, and all efforts to arouse the patient were futile.

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THE RELATION OF THE MEDICAL COLLEGES TO PRELIMINARY EDUCATION.

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THE principal objects of this Academy are to encourage preliminary education of a high standard before entering upon the study of medicine, as well as to elevate the profession,—that is, to raise the educational qualifications of the profession. In attempting to carry out these objects, it is the intention to persuade, if possible, the medical institutions of instruction to assist us in this laudable movement by raising their requirements for matriculation, instead of that of the payment of a fee only; and also to elevate the educational qualifications of the profession by enlarging the curriculum and lengthening the time of study to three and four years in graded courses, so that a more extended and thorough knowledge of medicine can be obtained before granting the degree and placing the graduates before the public as medical practitioners.

Two years after the organization of this Association, the Pennsylvania State Medical Society took up the subject at its meeting in May, 1878, and passed a law forbidding any of its members accepting students lacking the prescribed educational qualifications, to determine which every county medical society has been obliged to appoint annually a committee to examine every one desiring to study medicine, before being accepted by a preceptor.

The State Board of Health of Illinois, under the personal exertion and supervision of its able secretary, Dr. John H. Rauch, has made herculean efforts and accomplished very much in requiring the proper and efficient education of the physicians practising in that State. It has given the key-note to all the other States having a State Board of Health. From the action taken in Illinois, many of the schools throughout the country have changed the curriculum to a higher standard for both matriculation and graduation,—that is, have advertised such changes; but we will see later if they are honestly meant and will be carried out.

The great trouble and opposition come, unfortunately, from the older and leading schools, especially those in the larger cities, where quantity rather than quality is looked at, and thus the country is flooded with physicians, many of whom have the degree, with little if any qualifications to support it.

In looking over the Fifth Annual Report of the State Board of Health of Illinois, some very interesting facts in relation to the position taken by the various medical schools in the United States on the necessity of a preliminary education before admission to the study of medicine are to be learned.

According to the Report, the total number of medical schools in the country is ninety-one. The number now exacting an educational requirement as a condition of matriculation is sixty-one, where heretofore only thirty classed themselves in favor of an elevated standard.

The total number requiring attendance on three or more courses of lectures before graduation is sixteen, while forty-three

recommend, but do not compel, such attendance.

Fifty-six regular colleges and universities publish that certain preliminary requirements are necessary for matriculation. But in this list of schools there are some, perhaps many, which really should not be classed with those in favor of higher education for the student and practitioner of medicine. Some of these institutions have set their requirements at so low a pitch that it would have been fairer and more honorable to have said, "Requirements, none. We want students and money, and not a higher standard of education."

Let us see, from their own reports, what their requirements are:

"Evidences of at least a fair English education."

"Evidence of a good English education."

"If necessary, an examination by the dean or registrar."

"Evidence of a good English education."

"Preliminary education and training sufficient to enable him to profitably and properly engage in the study of medicine."

"A creditable English education."

"Sufficiently advanced in an English education to study medicine."

"Evidences of a fair preliminary education."

"A good English education."

"A good common-school education."

"At least a thorough English education."

"A certificate from a student's preceptor of his moral character, and that he is duly entered and properly qualified to study medicine. The responsibility of sufficient preliminary education rests, of necessity, with the private instructor."

"The responsibility of preliminary qualification must rest with the private instructor."

"Evidences of a good ordinary English education."

"An examination, if considered necessary."

All these requirements are very weak, and their enforcement improbable. In the schools where evidences of a good, fair, or thorough English or common-school education are mentioned as necessary for matriculation, nothing is said as to how these evidences are to be obtained; and "An examination, if considered necessary," is so far from the mark that nothing said would have been better. Still worse is the putting the responsibility of preliminary qualification on the private instructor. It is shoving the responsibility with a vengeance. And these schools are accepted by the State Board of Health of Illinois!

Now, can or should these institutions be classed with those who are brave enough to say to the world, "We purpose assisting in the higher preliminary education in the medical student in this country in perfect honesty and good faith"? I claim not; and therefore, making the deduction, there are but forty-one regular colleges in this country which are properly professing to raise the standard of education. Again, how many of these forty-one carry out to the letter that which they profess to do? I am sorry to say but few,—from what I learn directly, so few that it astonishes me that the State Board of Health of Illinois is so deceived by the mere declaration or announcement of many of these schools that they can accept their diplomas without a State examination. If all the schools should declare in their announcements, as a mere cover, that evidences of a good English education are required for matriculation, and continue the free and loose way of matriculating any one paying the fees, and still persist in pursuing the old course of delivering twice in two years the same lectures, the State Board of Health of Illinois and of the other States having the same rules and customs will be greatly deceived, and still permit some as poorly prepared and improperly educated physicians in their State as in former years. Only a short time ago I heard a high officer and professor of a medical school say, "We wish to do all this in relation to the preliminary qualifications; but what are we to do with the students who come to us? We must admit them." Let me say there is no "must" about it, if there is honesty in the intention of elevating the standard of the profession, and the schools will look at it in that light instead of from a monetary point of view.

At two of the meetings of the Pennsylvania State Medical Society since 1880, I heard reports from some of the county societies, in which it was stated that young men rejected by their committees on preliminary examination, and recommended to take a course of study in a good Eng-

lish and classical seminary previous to their entering upon the study of medicine, had been matriculated almost immediately after in medical schools which claim to require preliminary educational qualifications before matriculation.

I have been informed by many graduates, as well as by students, that when they matriculated no questions in relation to their educational qualifications were asked. The presentation of a letter from some physician, especially a former graduate of the school, acting as preceptor or friend, with the conventional fee, was all that was needed.

All this is not sustaining the effort of the State Medical Society to elevate the profession. Certainly higher education in the medical profession is as necessary as in the other learned professions, if not even more so, for the correct understanding and judgment of the complicated studies relating to it. A high conservative power is wielded by it for the well-being of the whole people, and every legitimate means should be used to foster and enforce it, especially by government laws; and the sooner every State has a Board of Health, with a committee of examiners of highly and thoroughly educated physicians to examine and license every one desiring to practise medicine, no matter from what institution the diploma is obtained, the better it will be for scientific knowledge, the standing of the profession, and the interests of the people.

There are thirty-six schools which have no preliminary requirements for matriculation, and which take all who come, educated or not, who are able to pay the five dollars matriculation and fees.

Of the number of matriculants of the different colleges, those advertising preliminary requirements of some kind had last year 4393, while the no-requirement institutions had 5808, as far as can be obtained. This shows the readiness with which constant overcrowding of the profession takes place, the colleges graduating many who, from the want of proper mental training, are entirely unfit to contend with others who have been so favored by the proper and necessary education to grasp the thoughts and requirements of the thorough study of medicine, as to be able to show to the world that they represent a learned and liberal profession, and claim to rank as peers among educated men.

TRANSLATIONS.

THE USE OF CAFFEINE IN CHOLERA.—At the November meeting of the Société de Thérapeutique, Paris, M. Dujardin-Beaumetz endorsed the recommendation of M. Huchard, of hypodermic injections of caffeine (.10 gramme, or 1½ grains) repeated several times daily, but insisted upon its administration in combination with benzoate of sodium, a substance in which it readily dissolves. Among the many remedies vaunted for cholera, some are good, a few are inoffensive, but there are some which are positively bad, and among these he would class subcutaneous injections of morphine, which are so generally recommended.

Taking a broad view of the disease from the stand-point of therapeutics, there are two varieties of cholera patients,—those who micturate and those who do not. When the morphine is given by subcutaneous injection, in the latter class, three things may happen: it is not absorbed, and remains where it is deposited; it is absorbed without being eliminated, and poisons the patient; or, finally, where taken up and eliminated consecutively, it may exist in too great a quantity in the system. It is, therefore, a dangerous remedy; but we should not on this account entirely banish opiates from the treatment of cholera.

M. Dujardin-Beaumetz equally and alternately employs subcutaneous injections of caffeine and of ether. He also proposes to try the treatment now employed by M. Hayem at the Hôpital St.-Antoine,—viz., when it is found that, in spite of stimulants of all kinds, the cold stage has been reached, there are injected into the veins two and one-half litres (five pints) of a solution of sodium chloride and of sodium sulphate at a temperature of 38° Cent. The patient, it is said, at once revives, when, profiting by his intense thirst, he is made to drink large quantities of alkaline solutions. This is done because the blood is always acid in cholera subjects. This method appears to have already given good results. One thing is certain, however, that it is entirely inefficacious among alcoholic subjects.—*Le Progrès Médical.*

OPENING OF MASTOID PROCESS.—Dr. Schwartze, of Halle, at the International Medical Congress, discussed the operation

of opening the mastoid cells, and gave the following as indications for operative interference:

1. In acute inflammation of the mastoid apophysis with retention of pus in the bony cells, if, after the application of antiphlogistics and Wilde's incision, the œdematous swelling, the pain, and the fever have not subsided.

2. In chronic inflammation of the apophysis, with subcutaneous or subperiosteal abscess, or mastoid fistula, and in this case even when symptoms do not exist of a nature to compromise life.

3. When, the mastoid being normal externally, there exists a cholesteatoma or a purulent collection in the middle ear which cannot be removed by ordinary methods, and when serious symptoms arise, or if an abscess from congestion is formed in the posterior wall of the auditory canal.

4. The external surface being healthy, and in the absence of purulent collection in the middle ear, if the apophysis is the site or point of departure of headaches intolerable and persisting for a long time, against which other remedies have been employed without effect.

The operation is of doubtful expediency in chronic incurable otitis media, where signs of mastoid inflammation are wanting and there is no retention of pus in the middle ear. The operation is contraindicated when there is certainty of metastatic abscesses being already formed, or in the presence of a secondary meningitis, or of an abscess of the brain.

Conclusions.—1. The operative opening of the mastoid apophysis is a valuable remedy against some of the gravest and most dangerous diseases of the ear. 2. The danger of the operation should be considered as light in comparison with that of the disease which it is intended to relieve.—*Annales des Maladies de l' Oreille*, etc.

On Compressibility of the Brain.—Professor Adamkiewicz presented a communication to the Society of Physicians of Vienna, on compression of the brain. He briefly recapitulated the results of his former experiments concerning pressure of the brain, given in a previous lecture, then passed on to the relation of the compressibility of the nerve-masses. It is easy to prove the compressibility of the brain-matter. If one fits a piece of laminaria in the brain of a rabbit, after a few days it is swollen, and the brain-substance locally depressed. The brain, however, has remained quite normal in all its layers, and is consequently compressible. This fact is, therefore, proven. The leading authorities upon the subject teach that a tumor which generates itself in the brain causes increased tension of the cerebro-spinal fluid, and, as a further consequence, compression of the vessels and anæmia. In order to answer the questions, how do the blood-vessels act during intra-cranial tumors? and does the resulting anæmia occur through compression of vessels? he again inserted laminaria tents. This time he bled the rabbit to death, and then injected the blood-vessels. It was demonstrated that they were hyperæmic at the point of compression; also that a fluxion had afterwards occurred, on account of the paralysis of the muscles caused by the pressure. The compression of the brain-tissue therefore does not ensue at the expense of the vessels, nor at the expense of the incompressible liquor. It must be due to a condensation of the cerebral tissue itself. X.

Hydrocele in Woman.—Prof. Hennig, of Leipsic, read a communication upon this subject in the *Versammlung Deutsches Naturforscher und Aerzte*, in which he systematically considers the anatomy, etiology, clinical varieties, diagnosis, and treatment of this rare affection. He had found in medical literature forty-one cases, two of which had been under his care. Often the effusion in the canal of Nuck is complicated by protrusion of some of the viscera, which possibility must be taken into consideration. In some cases simple puncture, in others injection of iodine, was sufficient to obtain complete occlusion of the sac. Excision of part of the sac and packing the cavity with charpie, and in one case the ligatures (of iron wire), were also successful.—*Deutsche Medizinal Zeitung*, October 16.

Coffee made with distilled water is said to possess delicacy of taste, improved aroma, and, in short, is more agreeable and acceptable in every way, possibly because the distilled water does not take up any of the tannin from the berries, which ordinarily is rendered soluble by the earthy carbonates.

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EDITORIAL.

DIABETES MELLITUS FROM A PHYSIOLOGICAL STAND-POINT.

DALTON'S investigations concerning the bile demonstrated the fact that this fluid is discharged into the intestine principally during digestion, while food is passing through the duodenum. It is highly probable that a similar provision for intermittent activity exists with regard to the discharge of liver-sugar into the blood passing through the hepatic vein. As this sugar, when assimilated, is directly concerned in supplying energy to carry on various activities of the body, and as these activities are not uniform and constant in their operation, it follows that there must be some nutritive mechanism which regulates the glycogenic function of the liver so as to regulate supply in accordance with demand; for it is well known that the amount of sugar in the general circulation is almost constant, the normal proportion of sugar in the blood being put down by Frerichs at 0.12 to 0.33 per cent. Recalling the statement of Von Becker, that when in rabbits the proportion of glucose in the blood exceeds 0.50 the urine will contain sugar, the question is pertinent, and has been frequently asked, What are the conditions giving rise to an excess of sugar in the blood? The answer to this will indicate in what direction we are to seek for the pathology of diabetes mellitus.

The statement is commonly made—probably in imitation of the separation of jaundice into the two classical forms of reabsorption and suppression—that diabetes may be due either to increased production of sugar by the liver, or to its defective assimilation by the various organs of the body. With regard to the latter supposition, on looking at the subject from a physiological stand-point we cannot see the slightest warrant for the supposition that glucose ever accumulates in the blood owing to defective assimilation by the tissues. On the contrary, there is a strong probability that the supply of sugar taken up by the blood is efficiently regulated in health, in accordance with the demands of the body, by a nervous mechanism acting through the vaso-motor and trophic nerves of the liver itself.

When the blood contains an excess of glucose the conclusion is at hand that the hepatic nerve-supply is in some manner disturbed, thus permitting the blood-serum to convert a greater quantity of glycogen into glucose than can be utilized in the immediate demands of the economy, and to wash the excess through the hepatic veins into the general circulation, where it acts finally as a diuretic in its escape through the kidneys. In point of fact, this hypothesis of the production of true diabetes is supported by Bernard's classical experiment of puncturing the floor of the fourth ventricle, and by various forms of nerve-injury, all of which, according to Cyon and Aladoff, are effective in causing diabetes only through paralysis of vaso-motor nerves, thus permitting a more rapid flow of blood through the glandular tissue of the liver. Moreover, it has been repeatedly demonstrated that the serum of the blood, at a moderately-warm temperature, has the power of converting glycogen into sugar. It is only necessary, therefore, to cause an increased quantity of blood to flow through the liver in order to increase the proportion of glucose in the general circulation.

An efficient cause of diabetes must therefore exist, in general, in all those agencies capable of disturbing the normal action of the vaso-motor nerves, the gravity of the disease depending directly upon the

degree and persistence of this disturbance. Diabetes appears, therefore, in certain cases of cerebral hemorrhage or meningitis consecutive to injuries to the cranium and accompanying neoplasms of the medulla. It may also appear from psychic excitation, as persistent emotion (Frerichs) or mental strain; and in certain nerve-disorders, as neuralgia, or nerve-injury. It is possible in some cases of diabetes that there may be a wide-spread degeneration of nerve-structures accompanying the rapid waste of the body and general disorder of nutrition rather than a definite local lesion. The glycosuria following chloroform-inhalation, muscular exercise, and surgical operations upon the abdomen is transitory, because the reflex vaso-motor disturbance rapidly subsides. The influence of poisoned blood in producing temporary glycosuria may be explained in a similar manner.

There is a class of cases of intermittent glycosuria in the production of which the liver may take no part whatever. Here physiology must again be called upon to elucidate clinical phenomena. Under ordinary circumstances, the lacteals principally carry into the thoracic duct emulsified fat, the capillary blood-vessels appropriating the glucose and albuminose formed in the process of digestion and absorption. A very slight alteration of conditions, and the chyle may take up an excess of glucose and deliver it into the subclavian vein without the liver ever having an opportunity of converting it into glycogen. As the total quantity of chyle, according to Bidder and Schmidt, is thirty pounds daily (or about twice the total volume of blood in the vessels), it is evident that a slight excess in the chyle would cause a very decided increase in the proportion of glucose in the blood directly after a meal. This would be more likely to occur after the ingestion of honey or maple-sugar, or of sweet fruits. The occurrence of sugar in the urine of rabbits fed upon carrots after several days' fasting might be explained in this manner.

Glycosuria may also be due to some abnormality, some unknown chemical or physical change in the liver-sugar which makes it less easy of assimilation by the tissues and more irritating to the kidneys. The glucose that occurs in the urine may not be vitally identical with normal liver-sugar and yet be chemically indistinguishable from it. Starch and glycogen are alike in chemical composition, but differ in their properties. In point of fact, this difference between liver-sugar and other varieties of sugar (including glucose artificially made from starch) was long ago recognized by Bernard.*

Several classes of glycosuric diabetes may now be recognized: first, the form in which there is a nerve-lesion more or less extensive, and whose effects upon the glycogenic function of the liver may be permanent; in this we recognize the fatal form of diabetes, which, in the absence of a better designation, might be called the *neurotic* form, or diabetes mellitus; secondly, a form in which there is a transitory nerve-disorder, whether of reflex origin or caused directly by vitiated blood, which might be termed *functional* glycosuria; and, thirdly, a form connected with chylification, which might be termed *digestive* glycosuria. Possibly, to these may be added a rare form with obscure etiology (probably, as above suggested, connected with abnormality of secretion), which might be designated *essential* glycosuria. There may be other varieties of diabetes (for instance, that accompanying pancreatic disease), but these at least illustrate the fact that glycosuria as a symptom is susceptible of several explanations, although the differential diagnosis may in some cases be practically impossible at present.

* Leçons de Physiologie expérimentale. Paris, 1855. Page 213. Quoted by Dalton.

THE LABORS OF THE LUNACY BOARD.

WE have already had occasion to notice the success of the Lunacy Committee of the State Board of Public Charities in detecting cases of improper detention and inhuman treatment of isolated cases of insanity in different parts of the State. Although the law of 1869 placed it within the power of any individual to compel the removal of insane persons manifestly suffering from want of proper care or treatment, yet this law was seldom invoked, because it was the business of no one in particular to search for such cases, and the neighbors, especially in country districts, shrank from the consequences of reporting such cases when they were known to exist. It was only in August last that the Committee went actively to work and sent out circulars of inquiry to the physicians of Pennsylvania. As a result, they have been able to report to the State Board eighteen cases of alleged improper treatment which they had investigated, in some of which gross neglect and wanton cruelty had been practised. Several of these have been already removed to State hospitals, and new cases are constantly coming to light. Dr. Morton and the Secretary, Dr. Ourt, recently investigated four cases which had been kept chained in out-houses, like beasts, for periods of from five to sixty-five years, and took steps to secure proper care for them. In view of these aggravated instances of neglect which it has discovered, the Committee recommend the passage of a law making it a misdemeanor for any one to improperly detain or conceal an insane person of mature years.

A gratifying feature in the work of the Committee is the cordial manner in which the members have been aided in the discharge of their duty by the profession throughout the State, and the readiness with which their recommendations, as a rule, have been adopted by those having the insane in charge, which has rendered their labors much less arduous than they had anticipated.

A FATAL ENDEMIC BOWEL-DISORDER IN VIRGINIA AND KENTUCKY.

IN Southwestern Virginia and Eastern Kentucky a peculiar endemic has lately been raging, in which whole families have perished, the total mortality being variously estimated at from three hundred to a thousand. The district afflicted is about seventy by eighty miles in extent, situated on the slopes of the Cumberland Mountains in Eastern Kentucky and principally in Lee and Wise Counties in Southwest Virginia. The outbreak is attributed to a prolonged drought, which has made the water-supply low, the streams being more than usually charged with mineral and vegetable substances.

In the newspaper accounts the disease is described as having some appearances of cholera, being characterized by great thirst, cramps, frequent and profuse watery discharges from the bowels, and rapidly-fatal course, death occurring in from two hours to as many days. In Wise County, Virginia, where the epidemic is still in existence, it is said that deaths have been so numerous as to make it difficult to provide for the proper burial of the victims.

We await the medical accounts of this epidemic with interest, and hope to publish a further account of it. Possibly it may throw some light upon the pathology of the "black tongue" disease, a strange epidemic which ravaged many parts of this country from 1841 to 1846, and which was called epidemic erysipelas for the want of knowledge as to its real nature, although Bennett found that not more than one-sixth of the cases showed the customary external evidences of erysipelas.

NOTES FROM SPECIAL CORRESPONDENTS.

CINCINNATI.

IT was supposed that the inundation of a large part of our city last February would result in an increase of sickness. This has not been the case. On the contrary, the health of the city has never been better than during the summer and up to the first of the present month. This condition may be partly due to the general cleaning up which followed the flood throughout the entire submerged district.

Within the last month, however, there has been an increase in sickness, and two weeks ago the death-rate from natural causes was higher than it has been since the smallpox epidemic of 1882.

Diphtheria and scarlatina prevail in almost an epidemic form in some quarters of the city. The central part of Walnut Hills is especially affected, where the drainage is bad and efficient sewers have not yet been constructed. A number of the students of Lane Seminary, situated in central Walnut Hills, have been affected with what in some cases was pronounced diphtheria and in others tonsillitis, the diseases seeming to be not easily differentiated. The fact that scarlet fever and diphtheria are raging in the same quarters at the same time may lead to some interesting facts as to their relation.

The medical colleges are all complaining of a comparative dearth of students. This is possibly due to the financial distress under which the whole Western country is laboring. Many one- and two-term undergraduates are practising medicine in remote country districts in order to earn money to take them through college.

The Ohio Medical College, being the largest, suffers the most, the shortage, compared with the last half-dozen years, being perhaps twenty per cent. In this college there have been no changes in the regular faculty. Among the new assistants, Dr. David Debeck, Professor Seely's assistant in the Eye and Ear Clinic, has been doing some very good work. Fresh from a course in the German universities, he is rendering valuable service to the clinic, and has infused new life into the private courses of that department. Dr. Roeder, the late demonstrator of chemistry, having during the summer died of apoplexy, Dr. W. S. Christopher has been appointed to fill his place, which he does with marked ability.

The Miami College has almost the usual number of students, although the number of late arrivals is not so great as usual. Dr. Clendennin has been made dean of the faculty instead of Dr. John Murphy, and also fills the chair of surgery left vacant by the removal of Dr. Kearny to Knoxville, Tennessee. The city, no less than the college, feels the loss of Dr. Kearny, who is not only a skilful surgeon, but also a perfect gentleman. The chair of anatomy vacated by Dr. Clendennin has been well filled by the appointment of Dr. F. W. Langdon, of some considerable celebrity as a field naturalist and comparative anatomist, as well as a rising physician. The faculty is certainly strengthened by this addition. Dr. Langdon's place of demonstrator of anatomy has been filled by Dr. Eric E. Sattler. Dr. W. A. Rothacker, Pathologist to the Cincinnati Hospital, has been made Lecturer on Pathology, since which time this ordinarily dry subject has become the most interesting one in the whole course.

The Board of Health is now wholly in the hands of non-professionals, and its work is not nearly so satisfactory as when the health officer was a physician. The sanitary condition of Cincinnati, taken as a whole, was, perhaps, never worse, and there seems to be no prospect of a change before the next spring.

A. B. T.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

AT a meeting of the Society held October 8, 1884, Dr. William M. Welch, President, in the chair, Dr. J. V. Crandall read a paper upon "Croup," in which he urged a more careful diagnosis between this condition and diphtheria, and advocated tracheotomy, and reported eight cases in which it had been performed, with five recoveries.

DISCUSSION ON CROUP.

Dr. J. Solis Cohen, in opening the discussion, said: The principal impression gained from this paper is the importance of tracheotomy. As regards the identity of these diseases, while I contend that there is a difference, I am not prepared to recognize so great a difference as is claimed by the reader of the paper. Croup and diphtheria do not present in the alleged proportionate frequency. True membranous croup is a very rare disease, and that is the reason so many disbelieve its existence. The series of successful tracheotomies reported by Dr. Crandall is very remarkable, and I trust that in future his success may continue to be as great. It is certainly greater than any that has been reported in this or any other city probably in the United States. Some years ago (1873) I prepared a paper for this Society, in which the results of more than five thousand cases were given. The proportion of successful operations was about one in

four. Before that paper was presented, operations had been rare in Philadelphia; since then they have become more frequent. The ratio of success is not always maintained in one's later experience. Thus, the late Dr. Hodge, who at one time reported four cases, three of which recovered, told me that he had subsequently operated seven times in succession without another recovery. Dr. Jacobi, whose success had been exceptionally good at one time, informed me some years afterwards that he had been so unfortunate as to lose one hundred cases in succession, and thus his early confidence in tracheotomy has been modified.

The reason for this variation of results is, I think, plain. We are careful of our first cases. We see them frequently after operation, just as the writer of the paper has done. When we become older, this time is not at our disposal. The after-nursing I regard as of the very highest importance, and I have long made it a rule never to operate unless sure that this will be properly attended to. The time for operation is a question of great moment. The best rule is to operate as soon as the thought of the necessity comes into your mind. Success depends on early operation, other things being equal. The tube appears to me to be a necessity. To dispense with it I regard as dangerous, notwithstanding it is thought by some to produce irritation and thus favor the deposit of new membrane. A few years ago, impressed with the encomiums of Dr. Martin, of Boston, I adopted the plan of keeping the edges apart by ligature without a tube; but inattention in nursing allowed the opening to become so frequently occluded by the soft parts, in the motions of the child, and suffocation, fortunately overcome at the moment, having ensued on one occasion, I have felt no desire to repeat the experiment.

Steam in the room and the maintenance of an equability of temperature are important. If I had but two things to depend upon in croup, I would choose vapors from slaking lime. But a small piece in a pan of water upon the stove will not answer. Copious disengagement of vapors is needed, just such as were produced by the ignorant Irishman mentioned in the paper. I have no notion that the action of the lime is chemical, although I am aware of its slow action on membrane in a test-tube. I believe that it acts mechanically. Small particles of lime are carried up with the vapor of water; these get under the false membrane, which does not everywhere hug the tissues closely, and act as minute wedges; the accompanying vapor of water follows and detaches the products.

I believe that I have seen life saved more frequently by lime used in this manner than by tracheotomy. Dr. Crandall has been fortunate in braving the contingencies that surrounded some of his cases. There are very few men brave enough to operate without adequate assistance, and with the light furnished by an uncertain lamp. Anomalous blood-vessels often give unexpected trouble.

As regards the point of incision, my own plan has been to perform the low operation; that is, the one below the isthmus of the thyroid gland. A larger tube can be inserted there, and the wound is farther from the seat of disease. It is true this is the more difficult operation, but there is no occasion for a hurry, unless immediate death is threatening. The ten or fifteen additional minutes required for a deliberate operation steal nothing from the patient's chance of life. In an emergency of course there is no choice. All the tissues may have to be incised in one cut. Another fact rendering the lower operation more favorable is the lessened liability of coming directly upon masses of pseudo-membrane which may be forced down the trachea in the very act of incising it.

An important point, too, not appreciated by the majority of operators, is that this false membrane is a foreign body, and should be removed. The first thing to be done after the trachea is opened is not to put in the tube, but to make a thorough search for false membrane, and to remove all within reach. Then the edges of the cut should be kept asunder and cough be excited to drive more out. If this were done more frequently, the statistics of recovery from the operation would be much more favorable.

We sometimes have hemorrhage to deal with. The best method to treat this is to plug the wound about the tube with absorbent cotton. Never hunt for the vessels; pressure gives the best results. The character of the tube is important; these are often found made of hard rubber, but I do not consider such material desirable. It is thicker than silver, thereby lessening the calibre, and does not tarnish when the wound goes wrong; and this latter characteristic of silver tubes is frequently of service. The tube should be of equal calibre throughout, and not made tapering, so that the patient may get all the air he is supposed to get.

In answer to an inquiry from Dr. H. R. Wharton as to his use of chloroform, Dr. Cohen replied that the operation was made easier by anæsthetics, but the safest plan is not to use them. Ether is out of the question if ordinary artificial light be close. The patients were usually numb and insensitive from impending carbonic acid poisoning, and when retaining sensibility often seem to understand the purpose of the operation, and do not struggle. Struggling should be prevented by wrapping the trunk and limbs in a sheet or a towel.

Dr. H. R. Wharton: I agree with Dr. Cohen, that the results of Dr. Crandall's

operations have been remarkably successful. The results of my own cases have been fairly encouraging.

As to the two diseases under consideration, I believe in their non-identity. With Dr. Cohen, I am opposed to the use of an anæsthetic in the operation of tracheotomy, and believe that I have seen two cases lost through its use. The after-treatment of cases of tracheotomy, when performed for croup or diphtheritic croup, is most important, and I consider a moist atmosphere very necessary in these cases. At the Children's Hospital, in this city, we have a room especially fitted up for tracheotomy cases, which can be readily filled with the vapor of steam from steam-heating pipes. The permanent removal of the tracheotomy-tube has, in my experience, often been a matter of greater difficulty than its original introduction. I recently had a case in which the tube was removed on the thirteenth day; the condition of the patient was good, the temperature and pulse being normal. An attack of dyspnœa supervened two hours after the removal of the tube; the gentleman left in attendance was unable to reintroduce it, and when I arrived the child was dead. I have performed tracheotomy five times for diphtheritic croup, with two recoveries; one of the fatal cases was the one just alluded to, which died on the thirteenth day after the operation, from an accidental cause.

Dr. J. M. Barton: I regret that Dr. Cohen has not given a more definite rule "when to operate" than "when you begin to think of tracheotomy, then is the time to do it." As soon as you make a diagnosis, and perhaps before you make a diagnosis, of membranous croup, you think of tracheotomy. I was called in two cases lately by recent graduates to perform tracheotomy in croup. Doctors, parents, and friends were all urgent for immediate operation; they were evidently under the impression that it meant without operation certain death, with operation instant recovery; the cases were not urgent, they both had croup, but there was no important obstruction to respiration; under careful treatment, which had been neglected, they both recovered without tracheotomy. My own rule has been, when the tissues just above and just below the sternum decidedly recede during inspiration, when the face becomes slightly livid and the respiration hurried, with the usual symptoms of croup, the time to operate has arrived.

I have not found ligatures of much use in keeping the wound in the trachea open. In operating low down in a young child, with small and deep trachea, the ligatures pull directly towards the surface. A probe bent into a circle and a hook fashioned on each extremity will keep the wound open by its spring, until a properly fitting tube can be obtained.

Is it desirable to operate *in extremis?* I have operated on several such cases in which artificial respiration had restored them, but they all perished in from one to three days.

Dr. Nancrede: I have been much interested in the excellent paper read by Dr. Crandall, but dissent from the evident impression intended to be conveyed by the writer, that tracheotomy is a trivial operation and one which may be undertaken without any hesitation. I am not ashamed to rank myself with those surgeons who dislike such operations, especially when so bold a one as Billroth says that he blames no surgeon for declining to perform laryngotomy on a young child. This may seem exaggerated language, but although in the majority of cases the operation is a simple one, yet it may demand all the surgical skill and nerve that the surgeon is possessed of, as in the last tracheotomy I performed. Two cases have been related this evening in which death occurred during the operation by most competent operators. Billroth has had a similar experience, and I know of a number of others.

An otherwise good, general practitioner, with a previous hospital experience, sent for me on one occasion, saying that he had opened the trachea, but could not introduce a tube. Upon examination, I discovered that he had sliced off a portion of the right ala of the thyroid cartilage, but had failed to open the trachea at all. Other operators had cut either the normally or abnormally placed carotid artery, or had dissected between the trachea and the carotid artery until they had reached the vertebræ. Other accidents have also happened, which should make us pause, while we recall the fact to mind that if we do not get through the operation successfully we kill our patient. I cannot resist the impression which my experience has produced, that diphtheria and pseudo-membranous croup are identical diseases, modified by their locality, rapidity of progress, etc. Diphtheria is said to be distinguishable from croup by the presence of albuminuria, but German investigators have shown that albuminuria exists in a distinct proportion of cases of so-called croup. Besides, most croup cases *die* before this symptom can make its appearance. Moreover, all cases of undoubted diphtheria do not present at first, or at any time, those profound alterations of the blood and the kidney-lesions which result in albuminuria.

Finally, whether the diseases are identical or not, clinically it is generally impossible to distinguish them at the time of operation. I may refer to a series of cases in my own practice, which would have been decided by any member present as typical cases of true croup, which yet, by their subsequent course—even diphtheritic paralysis—or their marked contagiousness, proved to be undoubtedly diphtheria. The difference in character of

the false membrane in the pharynx, larynx, and trachea seems to be relied upon by some of the speakers as a proof of the essential difference of the two diseases. Precisely similar conditions are found in undoubted diphtheria, and are explainable on anatomical grounds, so that the membrane of croup and the membrane found in the trachea in undoubted diphtheria are identical in appearance, etc., being in the substance of the mucous membrane *in the pharynx*, but upon its surface in the trachea. There are many other similarities, but time does not permit them to be referred to.

As to when to operate, croup cases are divisible into two groups,—viz., those in which the dyspnœa is subject to violent exacerbations, but is slight during the intermission; and those which steadily increase, each paroxysm being succeeded by a relative intermission only, the dyspnœa steadily increasing. In the first class of cases the patient may, it is true, die in an access of dyspnœa, but there is time to try medical measures usually. In the second class, when there is marked depression of the epigastrium and base of the chest, and also of the episternal and supraclavicular fossæ, despite the persistent use of the admirable treatment suggested by Dr. Cohen, operate at once.

Personally, I prefer to operate without ether, although it is harder for the operator, unless the patient has become insensible from carbonic-acid poisoning.

The fenestræ generally found in the tubes I regard as ridiculous. They are generally to be found outside the trachea when the tube is in place.

There should be no hurry in doing tracheotomy. Both hurry and force are exceedingly dangerous, and kill the patient sometimes. A hurried operator may force down the membrane before the tube; the trachea, being more resistant, may be cut, while the membrane will give before the knife, if the latter has been dulled. Some form of dilution had better be used to permit the removal of loose membrane, etc.

[Subsequently Dr. Nancrede said, in answer to Dr. Stewart, "I am aware that diphtheria is a disease of asthenic character, but I deny that it always commences as such, especially in the larynx, and inquiry will often develop the fact that there has been an attack of pharyngeal diphtheria precedent to the croup."]

Dr. W. S. Stewart: I have been very much interested in hearing the discussion this evening. I remember hearing a paper read before this Society some time ago, in which the necessity of early operation in croup was urged. But the reader of that paper, when interrogated as to his success in his operation, had not had one recovery. In the paper of this evening there is a large proportion of recoveries. The contrast between the two papers reminds me of a little experience when I went with a brother physician, who had a subject, as he thought, necessitating an operation as a *dernier ressort* for croup; the parent of the child refused to permit the operation, as soon as the arrangements would be made; and so fickle-minded was he that three unsuccessful attempts were made to perform tracheotomy during an interval of two days, and still the child recovered without the operation. The difficult problem to solve is the mortality that would result from not operating, and the actual lives saved by operating.

I have no hesitation in maintaining that croup and diphtheria are distinct diseases.

I confess I have not had the experience of the last speaker in seeing a case of diphtheria develop and terminate fatally in a few hours. And I could not account for such results, except in the fact of its being an insidious development, and in its asthenic nature giving no special symptoms for a certain interval of time at first except the feeling of languor and an unaccountable sensation of lassitude. Croup, on the other hand, is a sthenic disease, is ushered in suddenly, and is always accompanied by a cough of a peculiar and characteristic sound. The membrane of croup is lighter in color than that of diphtheria, lies more on the surface of the fauces and trachea, and is more readily expelled by coughing, whilst the germs which enter into the formation of the diphtheritic membrane embed themselves within the tissue, and are of dusky hue, and with greater difficulty removed; it is not accompanied by a cough.

Dr. Jas. F. Stone: There is one point that I would like to emphasize, and that is the vital importance of attending the patient carefully after the operation. I am one of those who believe in the necessity and very great advantage of this operation, and in its early performance; and yet I do not believe it should be performed unless the physician will devote a proper proportion of his time to the after-treatment. When we consider that the operation is of a character that does not relieve the physician of his responsibility, but even makes it greater, we should be willing to devote days, and possibly weeks, to its proper performance.

Dr. Sajous: In a case which I saw to-day, operated upon by myself two weeks ago, I noticed that a peculiar odor accompanied each expiration, and, upon examination, found a spot of ulceration just opposite the fenestra (this being rather low down near the tracheal aperture of the instrument), upon the posterior wall of the trachea. I consider the fenestra as useless. The distance between the tube *in situ* and the wall of the trachea is sufficient for the passage of air, and when the voice can be used the tube does not offer enough interference to prevent the formation of the voice.

Dr. Formad: As to the misconception be-

tween croup and diphtheria; some gentlemen have expressed an opinion that there are different pathological processes in the two. Pathologists never asserted that the two diseases are clinically identical, but only that the pathological process is identical. If the product is different, it depends on the locality affected. We may have a urethritis or a cystitis; the diseases are different, and the symptoms different, but the pathological process is identical. It is nowhere said, in text-books of pathological anatomy, that croup and diphtheria are clinically, or even anatomically, the same.

In diphtheritic angina the deposit is deeply seated because the inflammatory exudate cannot get outside on account of the anatomical construction of the mucous membrane of the pharynx. In the larynx and trachea the exudate cannot stay below, it being expelled by the elastic tissue of the mucous membrane, which, moreover, has but one layer of an easily-permeable epithelium. The exudate is bound to get out as soon as formed. We may have similar exudates in any surface of the body, in each case the deposits differing with the local conditions. Virchow has well expressed these differences: diphtheria is "eine Einlagerung," croup is "eine Auflagerung," of the exudate.

In croup the absence of constitutional symptoms is easily explained. While in diphtheritic angina the deposit is embedded into tissues rich in lymphatics and blood-vessels, and death ensues usually from absorption of septic materials, in croup the deposit lies on the outside of the body; death may ensue from stenosis of the larynx or trachea, but not from absorption of septic materials, as there are but few blood-vessels and lymphatics in this situation. The anatomical difference fully justifies a clinical differentiation. The deposit of the exudate is like a nail, which may lie on the table or may be driven into the wood. The nail is the same in each case, but is under different conditions and has different effects.

Dr. Crandall, in closing the discussion, said: Dr. Cohen has referred to Dr. Jacobi's low percentage of cures latterly. Dr. Jacobi doubtless operated as scientifically and skilfully in his later as in former cases. So also does Dr. Levis; yet he reports many failures. I do not lay claim to great scientific accuracy, but wish to demonstrate the importance of after-treatment. The children averaged from three to four years of age, and this made it easier of performance in the cases given. I saw one of these cases every two hours, the other every four or five hours, and believe success due to this. I also believe that physicians should be able to perform this operation whenever called upon. I am under many obligations to those who have assisted me, this evening, in establishing the differential characters of these diseases.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held November 20, 1884, FORDYCE BARKER, M.D., LL.D., President, in the chair.

Dr. A. C. POST presented a new hard-rubber syringe for injection of the bladder and abscess cavities.

THE SURGICAL MANAGEMENT OF RACHITIC DEFORMITIES OF THE LOWER EXTREMITIES.

Dr. V. P. GIBNEY read a paper with this title, and said that by the term surgical management he wished to convey the impression that mechanical appliances, as well as cutting instruments, were surgical means for effecting relief. Despite the teachings of gentlemen who practised osteotomy, he was convinced that the bulk of the profession was of the impression that it was not every case of bow-legs and knock-knee which demanded surgical interference. He therefore raised the question, What cases can be safely left to nature? If he should state that many children recovered from deformity without any treatment whatever, he would be met by the statement that they did not have true bow-legs or knock-knee. The author then gave the definitions of these terms by Macewen, Little, of London, Poore, of New York, and others. But it was well understood by practitioners what was knock-knee, and it was his strong conviction that a fair proportion of knock-knee in children in the United States made a spontaneous recovery.

From 1871 to 1877 he saw at the Hospital for the Ruptured and Crippled two hundred and fifty-five cases of genu valgum in children under fourteen years of age. This represented a period when the apparatus for the relief of the deformity was theoretically inoperative, although practically it seemed to be of benefit. The patients wore the springs from six to eighteen months, and in nearly all the limbs were restored to their normal condition. Another reason for believing that many spontaneous recoveries took place was the scarcity of cases in the adult in this city. The large majority of osteotomies in this city were upon children from three to eight years of age. From 1871 to 1877 he saw only eighteen cases in patients between fourteen and twenty-one years of age, and only three in patients over twenty-one. Of the entire number treated at the hospital, two hundred and seventy-six, only fifteen were not cured, and these fifteen occurred among the twenty-one cases over fourteen years of age.

As to bow-legs, during the period of seven years prior to the introduction of osteotomy he saw at the hospital one thousand and five cases, nine hundred and ninety-seven of which were in children under fourteen years of age. He saw only three in adults, and

five in persons from fourteen to twenty-one years old. The large proportion of the nine hundred and ninety-seven came under treatment, and a good proportion never carried out the same. Their ages ranged from two to four years. Either the apparatus was very efficient or the limbs became spontaneously straight. The large majority of those operated upon in this city since 1879 doubtless were under seven years of age. It was very rare to see an adult American affected with bow-legs.

In answer, therefore, to the question, What cases should be left to nature? Dr. Gibney said that children under two years of age presenting bow-legs or knock-knee should not be subjected to apparatus or mechanical treatment unless the deformity be very exaggerated. Children under three years of age, with only a moderate degree of deformity, could, in his opinion, be safely left to nature.

In bow-legs we often had a general curve extending from the perineum to the ankle without any sharp deviations whatever, and again in many cases there was a sharp curve in the tibia and fibula at the junction of the lower and middle thirds. In the former cases he rarely found it necessary to employ any form of apparatus, while in the latter he rarely omitted to order an apparatus.

Knock-knee and bow-legs being more or less due to rickets, diet and general hygiene had much to do in the treatment. Many cases were cured on being sent to the country. Phosphates of lime and soda only acted upon digestion.

He practised manual force in these cases if the patient's parents were unable to buy apparatus, or were too improvident to give attention to its care, and in cases where one had little time in which to effect a cure; also in cases in which the bones would yield to the force, the other two conditions being present.

The author quoted with approbation from Macewen, who said that it might be safely concluded that *ostéoclasie manuelle* had served its time and could not be practised in the presence of the more exact methods of to-day. Among the more enthusiastic advocates of gradual correction of these deformities by apparatus was Little, of London. Even surgeons who favored osteotomy admitted that the age at which the bones yielded to force was the age for the use of springs. His own rule was to employ manual force if the bones would comparatively readily yield thereto. If he found the femur curved and the inner condyle unusually long in a case of knock-knee, he tested with his hands the ligaments of the knee and the femoral curve, and was guided in his selection of cases for the use of an apparatus. The age beyond which this test failed was from four to five.

All the springs now in use were constructed on one principle,—namely, to bring force to bear against the convexity at its apex. One class of springs was intended to exert moderate but continuous pressure, while another exerted momentary pressure. Of the latter method Dr. Shaffer was an advocate.

Osteoclasis certainly had not become popular in the United States, notwithstanding the excellent results obtained with it by Robin, of Lyons, and others across the ocean.

As to osteotomy, Macewen stated at the International Medical Congress at Copenhagen that, out of eight hundred and twenty personal cases of supra-condyloid osteotomies, there were only eight cases in which suppuration occurred; hemorrhage occurred in one case. Five died, but death was not due to the operation.

Dr. Gibney remarked that he had never seen an anterior tibial curve corrected by an apparatus. During the past six months he had performed nine linear and two cuneiform osteotomies at the Polyclinic, sending the patients home as soon as the plaster of Paris hardened, and in none had the temperature risen above 102° F. In one case of supra-condyloid osteotomy there subsequently occurred paralysis of the external peroneal nerve of two months' duration, due probably to callus.

From his operations Dr. Gibney had learned the following lessons: first, exaggerate the correction of the deformity; second, examine the limb at the end of a week, to ascertain whether the amount of correction gained was the amount desired; third, do not hesitate to refracture by manual force if it be necessary; fourth, with strict attention to details in operating and in the use of good plaster-of-Paris bandages well applied, cases could be treated in dispensaries nearly as well as in hospitals; fifth, in dispensary cases do all the operating at one sitting.

Dr. Gibney was still convinced that one lost nothing in observing Listerism as closely as possible.

DISCUSSION.

Dr. JOSEPH D. BRYANT agreed with the author of the paper, that many cases recovered spontaneously. He referred to the alleged causes of bow-legs, as weight of the body, muscular contraction, sitting with the legs crossed. The fact that many cases did not recover if left untreated raised the question whether any cases ought to be left to nature. Much was to be gained by good hygienic management. As to treatment, if he found the bones springy, he applied force to the greatest angle of convexity two or three times weekly. He believed, with Dr. Gibney, that every case which could be affected by moderate, or even a greater, degree of force, was suitable for treatment by an apparatus, and he favored a spring which was not sufficiently powerful to do injury to the soft parts. Osteoclasis had been used but little in this city, and he would not be willing to apply it near the joint. He looked upon

osteotomy as one of the most important branches of surgery during the present century, especially if combined with antisepsis. He had yet to experience any ill result following the supra-condyloid or tibial operation. He had not even had a drop of pus associated with the operation. He related a case illustrating the advantages of antiseptic precautions. The oldest patient upon whom he had performed the supra-condyloid operation was sixteen years of age, and in that instance there was a temperature of 102° on the third day, and later another slight increase, but no local condition was the apparent cause, and the patient made a good recovery.

Dr. C. T. POORE would confine his remarks to a few points. First, it seemed to him important to know what was the exact pathological condition back of knock-knee, otherwise we would have no good basis for treatment. There were many cases in which there was apparent knock-knee, but in which there was no real bone lesion. In all cases in which there was a bone lesion, the cause he believed to be rickets. Traumatic cases were excepted. That being true, what should be the treatment? There was no question that in the early stage of rickets, before consolidation had taken place, the bones could be bent. He could not understand, however, how the limb could be straightened by mechanical force after consolidation had taken place. Dr. Gibney had seen spontaneous cure from knock-knee of true bony origin, and his word was to be accepted without question, but Dr. Poore thought the cases could not be numerous in which a cure was effected without treatment; at any rate, he had not seen any. He thought knock-knee of rachitic origin was much more common now than a few years ago in this city, and the fact that there were but few adults suffering from the deformity was due to the comparative freedom from the affection in this country. If taken in time, the cases could be successfully treated by properly-applied splints. If no benefit followed after a certain length of time, he could not see what further was to be gained by the continued use of splints. If you could not correct the deformity while the bone was soft, you certainly could not after it had become hard. The age at which the bone became hardened was a question of nutrition, and varied in different children. After the bone had become hard an operation was called for. As to osteotomy, he would add nothing to what had been said by the author of the paper, except that in most of the cases in which hemorrhage had occurred this might have been avoided. He had never kept a patient in bed more than five weeks. His rule was to remove the plaster of Paris on the fourth week, and within a few days the patient would be out of bed. He had never had a recurrence of the deformity.

With regard to osteoclasis, he thought it far better in bow-legs than manual force, as the fracture could be produced at any desired point if sufficiently far from the malleoli. He had never seen any accident of any kind result from osteoclasis, nor had he ever failed to correct the deformity. He thought long curves were better treated by osteoclasis, while short, angular curves near the epiphyses and anterior curves were better treated by osteotomy. He did not employ Listerism, strictly speaking.

Dr. M. H. HENRY said that for many years at the Immigrants' Hospital they had many children of foreign birth. There were few Italian children who suffered from deformity of the lower extremities. Most of those who were deformed were rachitic, and, with better diet, better bedding, and better clothing, they almost invariably recovered with little or no surgical treatment. The limit of their stay at the hospital on the island was five years.

Dr. M. JOSIAH ROBERTS, in speaking of the comparatively few cases of bow-legs and knock-knee in the adult in this city, said it should not be forgotten that the death-rate in children was greater than in more mature life, and this was especially so among those suffering from a constitutional dyscrasia. Moreover, recovery from these deformities was not usually absolute, but one of degree. He could point out many cases of bow-legs of moderate degree among the pedestrians of Fifth Avenue, and it would be found that persons thus deformed were incapable of prolonged locomotion or of standing for a considerable period of time. While he agreed with the author of the paper that there were many spontaneous recoveries, he wished to emphasize the fact that many cases of so-called complete recovery were recoveries only of degree. He showed photographs in illustration of this statement.

Dr. Roberts differed from the author in the view that the deformity in bow-legs pertained to the entire limb. Photographs of the bones with the flesh removed showed that the shaft of the femur and tibia was nearly or quite normal in shape, and that the deformity existed rather in the joint and the junction between the epiphysis and diaphysis.

As to what cases should be left to nature, while he believed with the author that many cases recovered spontaneously, he thought the surgeon could aid nature in every case, and shorten the period of cure. Manual force had a very limited application, being justifiable only in cases in which the bone was quite soft. There were different mechanical appliances which had proved of benefit, and among others was one by Dr. Davis, the founder of orthopædy in America, a description of which the speaker gave. He also called attention to the importance of instruments of precision in determining the exact degree of the deformity, and said that

without such measurements a general statement of a surgeon that his patient had entirely recovered was not of much value.

Dr. Roberts regretted that the author had not dwelt longer upon the subject of the best means for doing osteotomy. This question could not be considered as settled so long as surgeons continued to employ chisels for the division of hard bone, which, under the most favorable circumstances, was very difficult to divide in this manner, and, in the living subject, involved danger to the soft parts. He then described his electro-motor, the cutting apparatus consisting of a circular saw, which could be made to divide the hardest and largest-sized femur within three seconds. By protecting the soft parts with broad retractors, the most bungling operator could not do any injury with the instrument.

Dr. HOPKINS referred to a case of exsection of the knee-joint for knock-knee not of rachitic origin.

The PRESIDENT inquired as to the influence of sex as affecting the frequency of rachitic deformities of the lower extremities, and also as affecting spontaneous cure. He asked the question because it had often occurred to him to have anxious mothers express great solicitude for their little girls affected with bow-legs.

Dr. GIBNEY, in closing the discussion, said that, so far as he could recollect, the figures at the Hospital for the Ruptured and Crippled showed about an equal number of cases in the two sexes, with about an equal number of spontaneous cures. A great many women who had suffered from bow-legs during early childhood would be found to have flat-foot. He thought a good many of the adult cases seen in this city were not cases of knock-knee of the kind treated of in this paper, but occurred in stout men, and were of an atonic type, as described by Little.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

AN adjourned annual and a stated meeting were held November 24, 1884.

The retiring President, Dr. S. O. VAN DER POEL, read his address, in which he referred with approbation to the amount and quality of the work done by the Society during the past year, to the large increase of membership, amounting to one hundred and twenty-seven additional members since the last annual meeting, and returned his heartfelt thanks to the Society for the uniform courtesy which he had received at its hands during his term of office. He recommended that essayists seek to elucidate some particular point, either controverted or in need of fuller investigation, in the large field of medicine, and that those who partake in the discussion make their remarks relevant to the questions raised in the paper, and present their views in concise language, thus avoiding the emptying of benches by rambling debate.

The President for the ensuing year, Dr. DANIEL LEWIS, then called the stated meeting to order, and, after paying a eulogy to the retiring President, Dr. Van der Poel, and promising to advance as far as possible the interests of the Society which had conferred upon him the honors of its chief office, referred to the importance of all physicians who wished to take part in framing laws relating to the medical profession in the county and State joining the county medical society, and said that the law of 1880, regulating the practice of medicine in the State of New York, had proved far more reaching and effective than even its framers had anticipated. The necessity for a State Medical Examining Board was obvious as a means of suppressing quackery and promoting a higher grade of medical education. Such a board, however, should it be organized, as it was probable it would be in the near future, should have power to revoke a license to practise, if sufficient grounds for doing so were presented. He also thought it might add to the scientific interest of the meetings if the gentlemen expecting to take part in the discussion of any given paper would send their names to the Secretary, that the fact might be made known on the cards of announcement. He recommended timely measures against the possibility of an epidemic of cholera. The donation which the College of Physicians and Surgeons had lately received from Mr. Vanderbilt would probably soon lead to a change of location of that college, and he therefore thought it advisable that the Society procure at an early date another hall in which to hold its meetings.

Dr. Lewis then announced the following members of committees for the ensuing year: On Hygiene, Drs. Stephen Smith, Alexander Hadden, E. H. Jones, Cyrus Edson, William L. Hardy; on Ethics, Drs. George A. Peters, W. T. Alexander, Mark Blumenthal, C. C. Lee, Edward Waitzfelder; on Prize Essay, Drs. F. R. Sturgis, Frank P. Foster, W. R. Birdsall; on Auditing, Drs. P. Albert Morrow, Gorham Bacon.

On motion of Dr. VAN DER POEL, that portion of the address relating to obtaining a suitable hall for the Society was referred to the comitia minora.

ON THE THIRD STAGE OF LABOR.

Dr. SIMON BARUCH read a paper with this title, and said that his reason for so doing was that experienced and learned obstetricians were still at variance as to the proper method of conducting the third stage of labor. He then briefly referred to the common division of labor into three stages,—the first, second, and third,—which he accepted. In general terms, it might be said that, in proportion

as labor advanced, was any deviation from the normal processes dangerous to the mother. With the advent of the third stage, the patient was ushered into a condition in which the perils from abnormal processes culminated. Here attention to details which in themselves might seem insignificant was all-important for the preservation of the woman's health and preventing the destruction of human life.

There were three methods of dealing with the placenta in vogue at present. The first was the ancient method of pure expectancy; the second method consisted in active assistance in the removal of the placenta, and had as outgrowths the Dublin, and later the Crédé, methods; the third, or eclectic, method occupied a middle ground between the extremes of expectancy and energy of procedure. The author thought that in this department of medical art, as in all other departments, the golden mean was to be desired. He then quoted the views of various authorities, European and some American, with regard to the value of these several methods, particularly the expectant and Crédé's, and showed that many of those who professed to practise Crédé's method failed to do so in fact. Reliable statistics of cases treated according to the expectant plan and the method practised by Crédé showed the advantages of the latter.

It probably has been the experience of every obstetrician to have met with cases in which the placenta has been retained within the vagina, perhaps, for two hours without doing any harm, but it seems unreasonable to maintain that it was of any advantage to have the membranes retained for a length of time in this locality. The author had had but a single case in which the placenta had been unduly retained within the uterine cavity. He thought that many lives had been lost by waiting for the uterus to expel the placenta of its own accord after an abnormal and a protracted labor. Every case should be treated according to its own peculiar surroundings. It could be of no advantage to leave a woman lying hour after hour in her own gore, in anxious suspense and great discomfort, waiting, with the idea that we are giving nature fair play for the expulsion of the placenta. The eclectic method seeks to make use of all the advantages possessed by Crédé's, while omitting any of those measures which it might be well to discard.

The author then referred to the twofold power of contraction possessed by the uterus, the one being tonic and the other clonic. The latter alone constituted a true uterine pain. The former was illustrated during uterine involution after delivery. These clonic spasms for the expulsion of the placenta, or the third stage of labor, might be modified and rendered more or less abnormal by one or more unnatural conditions, as social surroundings, peculiarities in the second stage, the use of chloroform during labor, the tendency to hemorrhage.

The author spoke of his experience in midwifery among the colored people of the South as compared with that among the higher classes of the metropolis. In the woman of high social position many hours usually passed in what were called preparatory pains, and by the time the second stage had been reached the nervous system was in a high state of reflex irritability, the expulsive contractions were not so steady and forcible; and here the author believed existed a cause of rupture of the perineum, as during the last four years of his obstetric practice, which had been in the city, he had seen more cases than during his fifteen years' previous practice in the South. In the negress he often found the placenta expelled into the vagina very soon after delivery of the child, while this was seldom the case in the city woman. In the latter class of cases haste in the third stage of labor was strictly to be avoided; perfect rest under proper surveillance was the true course. Injudicious friction or pressure would cause undue uterine irritability and fail of the desired object,—viz., to obtain strong expulsive contraction.

The fact that chloroform had been given indicated that the uterine powers had been reduced; clonic contraction-power of the organ, which was necessary for the expulsion of the placenta, had been diminished. He would therefore recommend that the anæsthetic be diminished as the third stage was approached, and that Crédé's method be aided by the Dublin method of following the uterus down with the hand. When there was a tendency to hemorrhage, Crédé's method alone could not be relied upon: the uterus should be followed down as the child receded from its cavity, and should not be permitted to pass from under the hand. The method which he adopted, doubtless, was that practised by many other physicians, consisting in gently stroking the uterus to stimulate it to contraction, of grasping the uterus with the outspread fingers, intensifying the strength of the contraction, and making downward pressure for the purpose of aiding in expelling the placenta out of the vagina or vulva. It might be necessary, in some cases in which the placenta was grasped by the neck of the uterus, to make traction upon the cord, or to insert the disinfected fingers and make direct traction upon the placenta itself. It was his custom to place the two fingers of the right hand within the vulva, while the uterus was being compressed with the left hand, in order to guard against too forcible expulsion and rupture of the membranes. The author regarded twisting of the membranes as objectionable, as it was liable to excite too energetic contraction and rupture of the membranes.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held November 26, 1884, GEORGE F. SHRADY, M.D., President, in the chair.

OS COCCYGIS REMOVED BY OPERATION.

Dr. JOHN A. WYETH presented the coccyx which he had removed from a man, 36 years of age, who four years ago sustained an injury by falling backwards on the ice. No symptoms were noticed at the time of the fall, but a few months later the patient was seized with spasm of the sphincter ani muscle, which condition grew worse and led to two operations for fissure of the anus, the first operation being by the knife and the second by stretching of the sphincter. Dr. Wyeth recognized displacement of the coccyx by the fact that the stools were flattened and grooved, evidently due to some obstruction. Later he operated upon the same patient for inguinal hernia by Heaton's method. The patient was still a monomaniac, but Dr. Wyeth thought there would finally be entire cessation of the symptoms.

MODIFICATION OF OTIS'S URETHROTOME.

Dr. WYETH also presented Otis's urethrotome, which he had so modified that, when cutting through even the densest tissue, the extent of the incision could be restricted within absolute limits.

Dr. PEABODY had, during the past summer, removed the coccyx in a case of coccygodynia without giving relief to the symptoms, but the woman was afterwards cured by measures directed against neuralgia.

Dr. J. P. GARRISH had cured the symptoms in several cases of injury to the coccyx by dividing the nerve-supply along the surface of the bone.

Dr. W. M. CARPENTER said that Dr. Goodell, after operating upon cases due both to injury and to neuralgia, had reached the conclusion that in cases of coccygodynia the operation which promised the best results was removal of the bone, whereas in essentially neuralgic cases anti-neuralgic measures might be resorted to.

PULMONARY GANGRENE IN PNEUMONIA.

Dr. L. E. HOLT presented the lungs removed from the body of a boy three years of age, who died after two weeks' illness with pneumonic symptoms. The child had always been very healthy, and had never had any sickness except a bronchitis at the first year of age. At the autopsy a sacculated pleurisy containing turbid fluid was found over the middle of the right lung behind. Both lungs were strongly adherent to the chest-walls, the right one particularly so. There was extensive formation of new membrane over the entire surface of the right lung. The upper lobe showed only congestion and œdema. The upper portion of the lower lobe presented the usual gross appearances of broncho-pneumonia. Over the base were two large, irregular areas, dark in color, grayish at the borders, and in the centre gangrenous spots were found, varying in size from a walnut to a pea. The interior could be washed away with a moderate stream of water. There was no marked separation between the necrotic and the living tissue. The areas of gangrene did not correspond to the distribution of the pulmonary artery, but to that of the bronchi. The bronchi were much inflamed. The heart was normal. The kidneys were enlarged, light in color, soft, the markings indistinct. There was nothing to attract attention to the urine during life, but that found in the bladder after death was found to contain albumen and casts. Dr. Holt was not inclined to think there was any connection between the occurrence of gangrene in the lung and the disease of the kidneys. He quoted the literature of gangrene of the lung occurring during the course of pneumonia, and said that such cases were very rare indeed, and were found less frequently in children than in persons more advanced in years. The autopsy had been made by Dr. Northrup.

UREA NOT A CAUSE OF URÆMIA.

Dr. G. L. PEABODY said that at the last meeting of the Society he had expressed the opinion that too much stress had been laid upon urea as a cause of uræmia, his opinion being based more or less upon observations in the lower animals. Dr. Seguin had been of a similar belief, but spoke of experiments recently made in which it would seem that uræmic symptoms might be induced in lower animals by injection of urea into the blood. Dr. Seguin had since informed Dr. Peabody where he could gain access to the records of the experiments to which he had referred, and Dr. Peabody took occasion to show to the Society that it would require, according to the amount of urea necessary to produce death by injection into the circulation of the dog during these experiments, one pound and a half of urea to produce a fatal result in man. But it had been shown that in a man of one hundred and fifty pounds weight, dying of uræmia occurring in the course of kidney-disease, the blood contained only nine-thousandths of one pound of urea. There might be apparent fallacies in this manner of drawing conclusions, but he thought it showed very conclusively that such experiments upon animals could give us little useful information as to the cause of uræmia in man. The injection into the blood of benzoate of soda or of sulphate of soda, agents which were not in themselves poisonous, would likewise produce uræmic symptoms. The experiments quoted went no further than to show that the injection of a certain amount of any foreign substance into

the circulation would produce death; they did not show that uræmia was due to the presence of urea in the circulation. He had seen several cases in which there had been entire suppression of the urine, terminating fatally, in which there had been none of the so-called uræmic symptoms.

ABSCESS OF THE LIVER WITH OBSCURE SYMPTOMS.

Dr. PEABODY also related the history of a case and presented specimens, there being certain indefinite symptoms leading him to suppose that the man had once had typhoid fever and that his last illness was due to a relapse of that disease, but the autopsy showed two abscesses of the liver, the larger containing half a pint of pus. There were also ulcers of the large intestine. The stools during life had presented the ordinary appearance of stools after the taking of compound cathartic pills, which the patient had received for constipation.

SARCOMA OF THE KIDNEY.

Dr. FRANK FERGUSON presented a kidney, the seat of sarcoma, supposed to be congenital, removed by operation from a child four years of age. The history of the case had already been put on record by Dr. Little.

Dr. FERGUSON also presented a tumor of the first phalanx of the right ring-finger, which followed an injury, and containing a large number of so-called giant cells.

In reply to a question by Dr. WYETH, Dr. PEABODY and Dr. NORTHRUP said that it was very seldom that a case of congenital sarcoma came under observation.

RUPTURE OF ANEURISM OF THE ABDOMINAL AORTA.

Dr. G. A. DIXON presented an aneurism of the abdominal aorta removed from the body of a woman, 26 years of age, who was admitted to the hospital November 18 and died on the 21st. Her father died of phthisis, and her brothers and sisters died young. There was no history of syphilis. Since last spring she was treated in St. Luke's Hospital for femoral aneurism, which was reduced by pressure, and she was discharged cured. Three months ago her courses ceased, the appetite failed, there was nausea and some vomiting. A month ago the patient noticed a lump in the abdomen which pulsated. On examination, the patient was weak, anæmic, constipated; vomited a great deal; could not sleep because of pain. Physical examination revealed a systolic heart-murmur, a pulsating tumor in the epigastric region, the seat of a distinct impulse occurring with the second sound of the heart. The tumor had a marked thrill, with a double bruit. The patient died in collapse. At the autopsy was found an aneurism of the abdominal aorta, near the cœliac axis. Nearly the entire wall of the aorta was involved in the sac, and anteriorly was a rupture about half an inch in circumference. Above the aneurism was an atheroma, and below a constriction of the vessel scarcely admitting the little finger.

FIBROID TUMOR OF THE UTERUS.

Dr. H. C. COE presented two uteri with fibroids, removed by abdominal section.

GLEANINGS FROM EXCHANGES.

PAPAYOTIN is the active principle of the juice of the melon-tree (*Carica Papaya*, L.), native of the tropical zones, and flourishing especially in Brazil, where it only requires about six months to grow to a man's height and to furnish fruit which ultimately attain a weight up to fifteen pounds.

After three years, when the tree is about eighteen feet high, and about a foot in diameter, it begins to die off from above downwards. Up to this period, however, it is very fruitful, there being no period of the year when it does not bear either flower or fruit. The wood contains an abundance of yellow, rather bitter milky juice, which possesses in a high degree the property of digesting albumen, and therefore also meat, similar to gastric juice. It has, moreover, the remarkable property of not confining its digestive action to acid solutions, as is the case with pepsin, but it is equally active in neutral or alkaline solutions.

The French chemist Wurtz, in conjunction with Bouchut, first extracted the digestive ferment, *papayotin* or *papain*, in 1880. Bouchut employed it in the Child's Hospital in cases of dyspepsia and other disturbances of the digestive organs for which pepsin had previously been used, and obtained the best results. Rossbach found that the substance was capable of rapidly dissolving and removing the membranes forming in croup or diphtheria, and thereby greatly contributing to a favorable termination of the disease. It is assumed that by the "digestion" of the diphtheritic membranes and the morbid elements probably existing in them the further introduction of the latter into the blood is prevented. But it will require further study to fully clear up its method of action and its value as a remedy in these diseases. (It is applied by brushing over the diphtheritic spots a solution of the substance.) It is, however, important that only a reliable preparation be used, since there are some in the market which are quite inert. (Dr. W. Fliess, in *Pharm. Zeit.*)—*American Druggist.*

A CASE of fracture of the penis in a young and healthy man, with complete recovery, is reported by Dr. Veazie in the *New Orleans Medical and Surgical Journal* for October.

MISCELLANY.

COCAINE IN DENTISTRY.—In an article in the *Dental Cosmos* for December on the "Hydrochlorate of Cocaine," the new local anæsthetic, the author, Dr. Howe, speaks enthusiastically of his experience with it in filling teeth. The application of a few drops of a two-per-cent. solution upon cotton placed in the cavity of a tooth will reduce the sensitiveness of the dentine so as to permit cleaning and filling with practically no pain and but little discomfort.

THE BIOLOGICAL DEPARTMENT OF THE UNIVERSITY OF PENNSYLVANIA was formally opened on the 4th instant by Provost William Pepper. Addresses were made by Drs. Harrison Allen and Joseph Leidy. The Faculty of this Department is constituted as follows: William Pepper, M.D., LL.D., Provost of the University and *ex-officio* President of the Faculty; Joseph Leidy, M.D., LL.D., Professor of Anatomy, Director of the Biological Department; Joseph T. Rothrock, M.D., B.S., Professor of Botany; Harrison Allen, M.D., Professor of Physiology; Andrew J. Parker, M.D., Ph.D., Professor of Comparative Anatomy; Horace Jayne, M.D., Professor of Vertebrate Morphology; Benjamin Sharp, M.D., Ph.D., Professor of Invertebrate Morphology; N. Archer Randolph, M.D., Instructor in Physiology. Further details will appear in the next issue of the *Times*.

DEPARTMENT OF PHYSICAL EDUCATION AT THE UNIVERSITY OF PENNSYLVANIA.—On the 2d instant the Trustees of the University added a new department to those already in existence, and elected Dr. J. William White Director, with a place in the College Faculty and the title of professor. It is intended to model the new institution upon that of Harvard at Cambridge. The sum of fifty thousand dollars will be required for a gymnasium, of which ten thousand has been subscribed by the athletic department of the University.

NEW PROFESSORS.—Dr. Edward T. Bruen has been elected Professor of Physical Diagnosis, and Dr. Louis Starr Clinical Professor of Diseases of Children, in the University of Pennsylvania.

NOTES AND QUERIES.

FREIBURG.

TO THE EDITOR OF THE PHILA. MEDICAL TIMES:

DEAR DOCTOR,—In the *Philadelphia Medical Times* for August 23, 1884, I published a communication "Concerning Student-Life Abroad," and to the few remarks made concerning the University of Freiburg in Baden I would add an extract from a letter just received from Prof Baumler.

What I said about Freiburg and its advantages for health and opportunities for the deepest study was not overstated, and I sincerely hope that some of my countrymen may make that town a visit and become members of its ancient and honorable medical department. There are few places in Germany where better and more profitable work can be done. The student, native or foreign, has exceptional advantages there, and, the living expenses being very reasonable and the climate very healthy, I always urge the claims of Freiburg as of primary importance. I have in the communication referred to explained my reasons for so doing. Professor Baumler writes as follows, and I may say that by his own faithful efforts he has contributed not a little to the success of the improvements made:

". . . We try to do our best to further our university, and if you came here now you would find the hospital vastly improved, a new chemical laboratory, a new house for pathological anatomy and experimental pathology. A clinic for mental diseases, which will contain eighty beds, is going to be built immediately, and the newest addition to our laboratories will be one for zoology and comparative anatomy, under our celebrated zoologist, Weisman. . . .

(Signed) "CHRISTIAN BAUMLER."

It is very fortunate for the foreign student that Prof. Baumler is so kindly disposed to assist all who come in his way, and his distinguished position and time fully occupied show the generosity of the learned professor's character. With my best wishes for Freiburg and the faculty, I am

Very truly yours,
W. THORNTON PARKER, M.D.

ATLANTIC CITY, NEW JERSEY,
December 2, 1884.

OBITUARY.

PROF. SAMUEL M. BEMISS, M.D., of the Tulane University of Louisiana, on November 18 died suddenly of apoplexy, at his home in New Orleans, in the 64th year of his age. He was a man of distinguished attainments, of noble character, and of great social qualities. His loss is mourned as a public calamity.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM NOVEMBER 23, 1884, TO DECEMBER 6, 1884.

IRWIN, B. J. D., MAJOR AND SURGEON.—Granted one month's leave of absence. S. O. 112, Department of Arizona, November 28, 1884.

O'REILLY, ROBERT M., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty as attending surgeon, Washington City, D.C., to date from October 20, 1884. S. O. 284, A. G. O., December 4, 1884.

LORING, LEONARD Y., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty as post surgeon, San Diego Barracks, San Diego, Cal. S. O. 135, Department of California, November 19, 1884.

BARROWS, C. C., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—In addition to other duties, to take charge of Medical Director's Office, Department of Arizona, during absence of Surgeon B. J. D. Irwin. S. O. 112, Department of Arizona, November 28, 1884.

WILSON, GEORGE F., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Granted one month's leave of absence, from November 20. (Vancouver Barracks, Washington Territory.) S. O. 180, Department of the Columbia, November 18, 1884.

KNEEDLER, WM. L., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty at Fort A. Lincoln, Dakota Territory, and ordered to Camp Poplar River, Montana Territory. S. O. 140, Department of Dakota, November 25, 1884.

PILCHER, JAMES E., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—To be relieved from duty at Camp Poplar River, Montana Territory, and ordered to Fort A. Lincoln, Dakota Territory. S. O. 140, Department of Dakota, November 25, 1884.

WALES, PHILIP G., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Now at Fort Cœur d'Alene, Idaho Territory, ordered for temporary duty at Vancouver Barracks, Washington Territory. S. O. 179, Department of the Columbia, November 17, 1884.

MCCAW, W. D., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty at Fort Wingate, New Mexico, and ordered to Fort Lyon, Colorado. S. O. 228, Department of Missouri, November 26, 1884.

GRAY, CHAS. C., MAJOR AND SURGEON (retired).—Died at Geneva, N. Y., November 26, 1884.

NAVAL MEDICAL OFFICERS.

There were no changes in the Medical Corps of the U.S. Navy from November 23 to December 6, 1884.